DOCUMENT RESUME

ED 194 746 CE 026 987

TITLE	Managing ISSOE Programs. Dissemination Issues: Phase II, Final Report.
INSTITUTION	Cornell Univ., Ithaca, N.Y. Inst. for Occupational Education.
SPONS AGENCY	New York State Education Dept., Albany. Div. of Occupational Education Instruction.
PUB DATE	30 Mar 80
GRANT	VEA-79-3C-892GS
NOTE	154p.: For related documents see CE 026 988-989, ED 170 513, ED 179 700, ED 179 785, and ED 181 241.
EDRS PRICE	MF01/PC07 Plus Postage.
DESCRIPTORS	Administrator Role: *Competency Based Education: Decision Making: Educational Innovation: *Information Dissemination: Instructional Development: *Instructional Systems: Parent Role: Participation: Program Administration: Program Costs: *Program Implementation: Secondary Education: Student Role: Teacher Role: *Vocational Education
IDENTIFIERS	*Instructional Management Systems: *Instructional Support System Occupational Educ: New York

ABSTRACT

The Instructional Support System for Occupational Education (ISSOE) Dissemination Project was initiated to conduct research on the roles of individuals associated with the management of ISSOE. The goal was understanding the management concerns surrounding ISSOE dissemination. Phase 2 activities were designed and carried out to fulfill four major objectives: (1) to identify major role players in ISSOE implementation at state, regional, and local levels and describe their role: (2) to identify major problems and concerns of each major role player: (3) to externally validate preliminary results for the first two objectives: and (4) to provide methods of ISSOE program cost-estimation for decision makers. The principal methods used were interviews, questionnaires, and examination of relevant documents. Findings indicated a wide variety of activities within designated ISSOE roles but substantial consistency among role occupants. There was also some consistency across roles in the problems and concerns most frequently expressed. Six recommendations were made which suggest uses to which the information produced can be put for wider dissemination of ISSOE in New York State. (Appendixes contain interview guides and validation questionnaires.) (YLB)

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ISSOE

Managing ISSOE Programs

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Dissemination Issues:

Phase II, Final Report

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Dissemination Issues:

Phase II, Final Report

March 30, 1980

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This project was carried out by the Cornell Institute for Occupational Education, a component of the New York State Research Coordinating Unit, Division of Occupational Education Planning, Research and Evaluation, with funds provided by the Division of Occupational Education Instruction, under the terms of Grant No. 79-3C-892GS funded from the Vocational Education Amendments of 1976.

* * * * *

ACKNOWLEDGEMENTS

This project was initiated by Dr. Vernon Beuke. Dr. Beuke worked at the Cornell Institute for Occupational Education (CIOE) for several years and spent part of his last four months at the Institute directing this project. He left the Institute to take a position with Abt Associates in Cambridge, Massachusetts to direct the federally mandated study on state compliance with the Vocational Education Amendments.

Dr. Dennis Ridley replaced Dr. Beuke as Project Coodinator and completed the study. He also was directly responsible for the preparation of this final report.

They were assisted throughout their research by numerous members of the CIOE research and support staffs. Drs. Robert Frank, Peter Gray and Alan Edsall each contributed to the design, implementation and analysis of project activities. Dr. David Monk, visiting Professor of Education, Cornell University, provided considerable assistance on the cost estimation portions of the study. Throughout the project intellectual assistance was provided to the research by Phillip Harrington, Steven Farrar and Edward Kulick, Research Assistants at the Institute.

Finally, this project and final report would not have been possible without the excellent support staff at the Institute. This staff consists of Madeline Dean, Judith Nichols, Cynthia Moore, Kevin Cawley, Elaine LaRocque, Lois Snyder, and Lynn Rycroft, Institute Business Manager. Individually and collectively they play a major role in Institute projects.

James A. Dunn
Institute Director and
Professor of Education

April 10, 1980

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INTRODUCTION

This report covers the second phase of research concerned with dissemination of the Instructional Support System for Occupational Education (ISSOE). The following will place this research within the context of past and anticipated research.

Overview of the Report

The purpose of this report is to discuss the background of the project's Phase II activities, Phase II findings, and recommendations for further research. The various parts of Phase II will be organized in this report according to the major objectives of the project, with only a few minor adjustments to this overall plan of organization wherever the actual conduct of the project, or focus of study, deviated in some significant way from the major portion of the study. This mode of presentation will clarify for the reader both the notable variety and the underlying unity that the researchers found in the study.

PROJECT BACKGROUND

In addition to organization of the presentation by objectives, the informed reader requires a knowledge of the background research out of which these objectives coalesced. Therefore, the first part of this report documents the continuity between past and present phases of the research on ISSOE dissemination and implementation.

Of course, ISSOE Dissemination, Phase II was significantly shaped by the findings and formulations of Phase I. This direct antecedent of Phase II included a review of relevant past research, a colloquium series of noted speakers on the topic of adoptions of educational innovations, and a final report summarizing those findings having implications for ISSOE.

All of these sources influenced the development of Phase II, as will be discussed in the first part of this report.

However, the entire ISSOE Dissemination research, of which this is the second phase, was influenced by a prior set of circumstances and conceptual concerns. These influences included the management-related concerns of those responsible for monitoring ISSOE's development as well as perspectives derived from prior research on educational innovations. Since they set a context for the whole research program, these influences also will be discussed.

PHASE II ACTIVITIES

The second part of the report discusses the work carried out in Phase II. The report of this work will include project objectives, a description of project activities, and methods and findings for each of the objectives. Findings for the first three objectives are presented separately from findings from the fourth objective, since the fourth objective is sufficiently different to merit separate treatment. Within the first three objectives, findings will be organized according to the ISSOE role players to whom these objectives refer. The findings will also be presented in a format chosen for quick review and location of those findings most relevant to the reader. Finally, a summary review of findings will be presented.

RECOMMENDATIONS FOR FUTURE RESEARCH

The last part presents recommendations for further research in the light of Phase I and II. Some of these recommendations will be related to Phase I or the proposed Phase III, thus underscoring the continuity and programmatic nature of the questions addressed and the findings obtained in the two phases of ISSOE Dissemination completed so far. Another set of recommendations arising from this project do not relate directly to either Phase I or Phase III, but are in some cases related to ISSOE work either in progress or anticipated.

Definitions of Key Terms

Throughout this report several terms, very similar in meaning, may appear at times to be used interchangeably. Actually, the distinctions among them are quite important and should be clarified at the outset. These terms are "dissemination," "implementation," "utilization," and "institutionalization."

Dissemination is, of course, the title of this research project, and for this reason has acquired a broader significance within the context of the research than it usually has. Dissemination customarily refers to the spread of information about an innovation. It is typically an early step in the process of an innovation's adoption, since users need to be informed before they begin to use the innovation (although information by itself is not sufficient, as will become clear later in this report). Within the special context of this research, however, the term means more than the diffusion of information. It has acquired the broad meaning which includes the other terms listed above, and thus incorporates the whole process from invention to regular and routine use.

Implementation refers to the trial use of the innovation within the type of setting for which it was intended. For example, ISSOE curriculum is designed to be used within secondary occupational education programs in New York State. This is the intended context for implementation, or trial use of ISSOE, that is now occurring in many parts of the state. Since implementation is trial use, it can be more or less successful, and is not an end in itself. Implementation efforts lead to modifications with the goal of going beyond the trial basis of use.

Utilization refers to the continued use of the innovation on an on-going basis. Implementation is merely an intermediate step. Utilization, like implementation, may still require special monitoring to maintain the system, such as special attention to the management and evaluation requirements of the new system. Thus, utilization is not the goal in itself.

Institutionalization refers to making the innovation part of routine practice within the intended context, i.e., the regular academic operation of secondary occupational education. This is the implicit goal of all large scale educational innovations such as ISSOE.

In any large, complex system such as secondary occupational education programs in New York State, an innovation is likely to be in various stages of development toward institutionalization in various places. This report will document that this is the case with ISSOE. Therefore, the distinctions made above cannot be uniformly maintained with reference to the system as a whole. The reader must bear in mind, however, that when the report uses any of these related terms (or other ancillary terms such as "adoption" or "acceptance") a complex process is being described. If the reader keeps the above distinctions in mind the whole report should serve to clarify rather than to obscure this complex subject.

BACKGROUND OF THE PROJECT

Historical Background

The dissemination and implementation of the Instructional Support System for Occupational Education (ISSOE) have been of major concern since the beginning of the system in 1974. Early efforts related to ISSOE development involved only a small cadre of highly motivated, enthusiastic participants. These participants included: New York State Education Department (SED) personnel in the Division of Occupational Education Instruction, the Bureau of Occupational Education Research (BOER), the Cornell Institute for Occupational Education (CIOE), the Institute for Research and Development in Occupational Education of the City University of New York (IRDOE-CUNY), a small number of teachers, and a smaller number of local administrators.

Early efforts were small-scale in terms of geographical distribution and the number of curriculum areas affected. ISSOE maintained a relatively modest profile until the system's statewide activity began to expand. The number of curriculum areas covered by ISSOE materials continues to grow. A stimulus to this growth occurred in 1978 when New York State became a member of the Vocational Technical Education Consortium of States (VTECS), a consortium arrangement for development and dissemination of curriculum material similar to those developed in ISSOE. These materials, in the form of catalogs for various occupational subject areas, have been reviewed and revised to make them consistent with ISSOE materials.

The early strategy for dissemination and implementation of ISSOE was to develop the system at a few sites within the state, and in a few curricular areas, to a comparatively sophisticated degree. The rationale for such a strategy was to permit the growth of ISSOE to be closely monitored and guided by ongoing experience. It was hoped that, by maintaining a modest profile until ISSOE was well-developed in a few regions, ISSOE would be better prepared for public scrutiny.

However, ISSOE has expanded much more rapidly than was envisioned in the earlier stages of its development. This expansion, in turn, has made the previous strategy of careful management and evaluation of a few sites, prior to expansion, inappropriate for the management concerns surrounding ISSOE dissemination. As a result, the ISSOE Dissemination project has been funded over the past two years to conduct research on the roles of individuals associated with the management of ISSOE in order to get a clearer understanding of the management concerns surrounding ISSOE dissemination.

Conceptual Concerns

MANAGEMENT PERSPECTIVES

Considerable attention has been given to managing ISSOE dissemination. Emphasis on management ultimately made dissemination, the focus of this project, one of the major priorities of research on ISSOE. The concerns that stimulated thought about dissemination correctly noted that numerous educational innovations have come and gone in the last two decades.

Both to anticipate problems and to provide justification for implementing ISSOE, the State Education Department has become progressively more concerned with questions about management and evaluation. Those responsible for monitoring ISSOE's development were made sensitive to these questions through having to deal responsively with concerns of a growing body of actual and potential users. Subsequently, they sought to design procedures for both formative and summative evaluation, which take into account the complexity of the system and its components. Nevertheless, the rapidly changing character of the system has posed difficult design problems.

Partially through CIOE's findings from ISSOE Dissemination Phase I, SED identified the systems of linkages among role-players within ISSOE as a useful organizing principle. The concept of linkages appears to have the following merits:

- It permits comprehensive and realistic descriptions of ISSOE people, their responsibilities, and their interrelationships;
- It facilitates the description of the patterns of management and evaluation information flowing between role players;
- It encourages the identification of management and evaluation concerns which are not being met by current patterns;
- It provides a framework for determining the quality of information in terms of its timeliness, accuracy and adequacy for meeting the demands of management and evaluation;
- It allows us to gather information about the misinterpretation of roles and linkages or their absence in certain settings.

These characteristics have the potential to form the foundation of a comprehensive ISSOE management and evaluation system.

The immediate needs of SED until recently concerned provision of data for comprehensive formative evaluation (i.e., management) of a project still in an early stage of development. However, a long-range need also identified was to provide for summative evaluation results. The latter need reflects sensitivity to issues of accountability, an understandable concern for those who administer funds and monitor their use.

RESEARCH PERSPECTIVES

CIOE identified other concerns for ISSOE dissemination based on the research and development experience of senior personnel. This experience in the design and implementation of instructional systems focused attention on the process of ISSOE institutionalization. From this perspective, a critical issue is to make the effort to install competency-based vocational education in schools a targeted effort. That is, institutionalization must be guided by adequate analysis of those characteristics of teachers, users and managers that affect acceptance and use of ISSOE. Another concern identified through research and experience is the need to understand the variety of factors concretely affecting the ease with which the system can be implemented, such as availability of materials and the variety of incentives that might motivate teachers to operate within the ISSOE system.

SUMMARY

The concerns of SED and CIOE are complementary. Together they formed the background of ISSOE Dissemination, Phases I and II. These concerns demanded:

- a careful review of available information on educational change with implications for ISSOE;
- recommendations based on this background review;
- an improved understanding of the existing system described in terms of roles, linkages and concerns of users.

Overview of Phase I

Phase I was funded in March, 1978, with Vernon Beuke, Research Associate, assigned as Project Coordinator. The overall objective of Phase I was to identify alternative methods of, and develop prototype plans for, extended ISSOE dissemination and implementation.

Specific outcomes of Phase I included:

- a review of recent literature on educational innovation;
- a compendium of resource papers on educational change;
- a final report detailing alternative models and methods for ISSOE dissemination and implementation.

LITERATURE REVIEW

The Phase I literature review (Beuke and Farrar, 1978) was a distillation of the most significant areas of agreement in the literature on educational change with respect to the implementation and adoption of the new programs. Particular emphasis was placed on practical as opposed to theoretical implications of the theories and findings reviewed. Implications most directly related to new vocational education programs were also emphasized.

Four models of change, which have guided most innovation research, were examined. However, these models were found to offer little practical guidance for implementing new occupational education programs. Their chief problem was an over-rationalistic view of human behavior, which assumes educators have clear goals and are able and eager to seek better practices and adopt proven innovations. Although there is little evidence to support these assumptions, the review had heuristic value in the development of a more adequate and useful theory for implementing new programs in occupational education.

The four models reviewed by Beuke and Farrar (1978) were:

1. the Research, Development and Diffusion Model
2. the Problem-Solver Model
3. the Social Interaction Model
4. the Linkage Model

The first model assumes that agencies other than potential users should develop the innovation. The chief flaw in this model is the lack of attention to the needs of users. The second model assumes that users are involved in identifying problems for which innovative solutions are needed, while external resources provide potential solutions. The unsupported assumption of this model is that users will identify and seek solutions to educational problems without external stimulation. The third model assumes that agents outside the user system initiate innovations by exerting influence on key opinion leaders in the user system. The fourth model combines elements of the previous two. It assumes close interaction and mutual stimulation between the user and resource systems.

Actual study of the adoption of innovation in groups and by individuals further exposes the inadequacies of these models. Study of this process identified several phases or stages of adoption. The salient concerns of individuals and groups with regard to an innovation seem to vary according to stages. Therefore, tactics for implementation must be synchronized with users' stages of adoption. Models are sometimes based on the erroneous assumption that the concerns of individuals and groups

remain relatively stable across time. Model-builders have found it convenient to assume that the only significant change is related to possession or non-possession of adequate information and proof of its effectiveness. However, at one stage a group's members may need greater awareness of an innovation; at another stage, they may need more "how-to" information.

Strategies for the implementation of innovation were reviewed for practical implications. Although no single strategy is suited for all cases, some strategies are ineffective and unsuitable for implementing change in educational contexts. As a result of their review Beuke and Farrar (1978) concluded that, the most appropriate dissemination strategy for many educational contexts is the "marketing technology" strategy. This assumes that educational innovation needs to be "marketed" to a selected target audience in much the same way as any commercial "product." This strategy is composed of a number of specific strategies for assessing the marketability of an innovation and feeding this information back into production. The overall strategy is to focus on the user's needs. Will the product be perceived as worthy of purchase and use by the consumer?

Past research in occupational education innovation provided some guidance in the application of the marketing strategy to ISSOE dissemination. However, both the number and quality of studies in this area leave something to be desired. Successful implementation appears to be influenced by the following factors:

- adaptation of innovation to local needs;
- inservice training for practical classroom use;
- use of locally developed materials and involvement of local staff;
- a receptive institutional setting with administrative support;
- a favorable historical context; and
- adequate financial resources.

CONCLUSIONS APPLIED TO ISSOE

Based on a thorough analysis of factors that influence implementation, Phase I resulted in the preliminary findings discussed below. These findings were obtained by the following steps:

1. examining the generalizations about innovation adoption that pertained to the nature of the innovation, contextual factors, and implementation strategies; and
2. applying these generalizations to the ISSOE system.

In each instance, the data for these applications was limited to two previous studies of ISSOE which had some management and evaluation implications.

The factors identified in the literature search that related to the nature of innovation were discussed above. Utility of an innovation is enhanced by perceived compatibility with an organization's goals and traditions, perceived improvement over existing methods, and moderate expense of money, energy or time. Adoptability of an innovation will be enhanced if the innovation is:

- not too complex;
- readily observable;
- flexible enough to be adjusted to local conditions;
- accompanied by supporting materials;
- congruent with perceived needs of the use; and
- advocated by credible individuals.

Since the Harmon (1977) and Craig (1978) studies included only the perspectives of SED administrators, ISSOE researchers, and Regional Coordinators, no relevant data were available from actual or anticipated users upon which to evaluate the ISSOE innovation with respect to utility and adoptability.

Contextual Factors

The Phase I study supported the following generalizations about contextual factors that influence the implementation of innovations. Financial resources must be adequate to sustain change; but these resources will be insufficient if there is not adequate local support. Human resources that enhance the change process include the following: new roles, commitment to change based on perceived needs, support from positions of influence, and teacher participation and sharing of ideas. Planning must be adequate and shared in by those affected by a change. Communications should be based on face-to-face, two-way interactions and should not overload existing information channels. Regular, effective inservice training related to the practical application of the innovation is another important factor.

The available information on ISSOE provided some evidence of favorable contextual factors, together with some questionable areas. There were also apparent gaps in the evidence.

Harmon (1977) found that financial support was perceived to be satisfactory, while communications and project administration were actual or potential problem areas. The Craig (1978) study supported these conclusions. The Craig study also showed that Regional Coordinators were generally satisfied with project implementation, although problems were noted with SED program support, coordinator training and product quality. A gap in the evidence was apparent in the omission of the perspective of local administrators or teachers. No information was available on student or parent perceptions of ISSOE or teacher satisfaction with planning, communication and training.

Implementation Strategies

Beuke (1979) discussed the major implementation strategies in current use in the light of the available information on ISSOE. The strategies that involve re-education and/or manipulation were found to be the most

frequently used. The re-educative strategy has occurred mostly in the form of inservice training for practicing educators. The manipulative strategy has been used in attempts to influence local schools, through fiscal and program support, to undertake ISSOE curriculum development and implementation. Implementation strategies are often planned in the absence of specific, first-hand understanding of local needs, interests, attitudes and priorities. This understanding is specifically required for a marketing technology strategy to be implemented. However, any specific strategy or combination of strategies depends on having reliable information on local users' needs and characteristics.

Recommendations for Phase II

Foremost among the program areas identified for further study by Phase I were the specification of the intended users of ISSOE products, and more detailed information on the characteristics of specific users groups. Included here was information on their roles, linkages with other role-players, and the major areas of concern for each role in implementing ISSOE. The development of a model to represent such information, in a manner useful for management and evaluation decisions, was identified as a priority for the next phase of research.

Of less immediate concern, the estimation of ISSOE implementation and operation costs was identified as a need. However, in later consultation with the ISSOE Coordinating Unit, Division of Occupational Education Instruction, SED, project goals to meet this need were scaled down to the provision of assistance for future estimation of program costs.

PHASE II ACTIVITIES

ISSOE Dissemination, Phase II was funded in April, 1979 with James A. Dunn, Director of the Cornell Institute for Occupational Education, as Project Director. Vernon Beuke, Research Associate, served as the Institute coordinator of the project from April, 1979 to September, 1979 when he left the Institute to assume a position with Abt Associates. Subsequently, Dennis R. Ridley, Research Associate, has served as coordinator of the project. Others who have served on the project at various times included Robert Frank, Research Associate and Institute Coordinator for ISSOE Projects, Peter J. Gray, Research Associate, and Steven Farrar, Phillip Harrington and Edward Kulick, Research Assistants.

Project Objectives

The specific objectives of Phase II are listed below. With the exception of Objective 4, they are substantially as there were stated in the proposal submitted to SED. Only Objective 4 was revised through discussion with SED. Thus, the methods and findings presented in Part II are presented in reference to the objectives as stated below.

1. Develop a comprehensive list of individual participants (role-players) who have responsibility for ISSOE implementation at state, regional, and local levels, identifying their roles, contributions, area of decision-making, and linkages (interaction) with other role-players within ISSOE.

2. In consultation with other state and national projects concerned with the impact or implementation of competency-based occupational education, develop a prioritized list of major problems and concerns of each individual role identified in the first objectives.

3. Externally validate the lists generated in the first and second objectives above through questionnaires and interviews with a stratified sample of ISSOE participants.

4. Provide models or methods, or both, to aid future estimation of ISSOE program costs. The criteria for testing these methods are: (A) they simplify and clarify the data, and (B) they are potentially useful to decision makers in making management and evaluation decisions.

Actual progress on Objectives 1 - 3 did not follow the linear sequence implied in the list of objectives. The development of lists (Objectives 1-2) was accomplished in one step with the validation of lists (Objective 3) occurring at a later time. It was decided, in consultation with SED personnel, that field interviews would be useful for generating lists and continuously revising and refining those lists. Other methods, including questionnaires, were heavily relied upon for validation, as will be discussed below.

Methods and Findings: Objectives 1, 2 and 3

Several major role-players were identified as a result of Dissemination Phase II research. In this section, each role player is first discussed in regard to a preliminary identification of role activities, contributions, areas of decision making, and linkages with other role-players (Objective 1). Then, relevant issues and concerns identified along with preliminary role-perceptions and linkages are discussed (Objective 2). Finally, the results of validation efforts regarding the role-perceptions, linkages, problems and concerns are presented and discussed (Objective 3). The method for developing preliminary descriptions and for validating them varied considerably by role-player groups. Therefore, the methods used with each group will be discussed separately.

AREA FACILITATORS

Background

The three Area Facilitators are representatives of three teacher training institutions that have been funded by SED to provide supportive services to both SED and to Regional Coordinators in the development, validation/verification and implementation of ISSOE.

Facilitators service what is termed an "area" composed of several regions; regions are composed of several counties. One teacher training institution is located in each area. These institutions are: New York Institute of Technology on Long Island (Area A), State University College of Technology at Utica/Rome (Area B), and State University College at Buffalo (Area C). Area A comprises Regions 1-3; Area B comprises Regions 4-9; and Area C comprises Regions 10-13. These area and regional divisions were set by SED.

Methods for Objectives 1 and 2

Area Facilitators were contacted early in the project to arrange for face-to-face interviews. The initial contact led to an arrangement for an interview on November 19, 1979 in Albany. Another interview was arranged at one of the teacher training institutions on November 30, 1979. The third interview was deferred due to schedule conflicts.

Interviews began with a brief explanation of the purposes and objectives of the project. Questions, used as prompts, were directly tied to the objectives. For example, Objective 1 (role description) gave rise to such questions as the following:

- Can you describe the major activities that you engage in as an Area Facilitator?
- Whom do you interact with in your role as an Area Facilitator?

Objective 2 (problems and concerns) was addressed straightforwardly:

- What are your major problems and concerns at this time relating to your role?

A conversational approach was adopted to encourage open-ended responses within the general framework of the major questions. This assured that responses could be related to the objectives, while the flexible, semi-structured format allowed follow-up questions to be raised that were stimulated by leads in the interviews themselves.

From the tape recordings of the two interviews conducted in this early stage, relevant information was abstracted for inclusion in an outline format within the preliminary report of findings completed in January, 1980. Findings were not necessarily limited to the information which overlapped between the two respondents. The emphasis placed by respondents themselves on items of information related to the objectives was also considered. Two researchers, both familiar with the interview material, discussed all material to arrive at a consensus as to significant information for inclusion. This method permitted a further cross-check in terms of consistency of corroborative material from other interview sources.

Methods for Objective 3

The next stage consisted of validation of these findings. Rather than developing validation questionnaires for only three respondents, it was decided to ask each Area Facilitator to critique the material included in the preliminary report on Objectives 1 and 2 relative to their role. This request was made in conjunction with a meeting on ISSOE research and development, held at Cornell on January 29, 1980, during which the report of preliminary findings was distributed to Area Facilitators. Each Area Facilitator read the material soon after this meeting, and two of them offered their critiques in telephone conversations with the researcher

assigned to this project. Since the third Area Facilitator had not participated in the first phase of the research due to difficulties of scheduling, a face-to-face interview was arranged to obtain a more extended critique together with new material. On the basis of these inputs, a final revision was made to reflect the obtained information as validated.

Findings for Objectives 1, 2 and 3

The following findings are organized in an outline format for easy review and location of relevant findings. The information under the first main heading of the outline relates to background and roles. Parts A and B under this heading present a context for the major findings on the current role practices, which is Part C. The second main heading of the outline relates to formal and informal linkages with other individuals in ISSOE. The third main heading deals with problems and concerns. A fourth main heading, general management and evaluation issues, is also provided.

In terms of Objectives 1, 2 and 3, the findings organized under "current role practices" and "formal and informal linkages" are directly tied to Objective 1. The findings organized under "problems and concerns" are directly tied to Objective 2. The validation phase (Objective 3) is also included under these headings. That is, since the methods found to be most workable did not follow the linear sequence implied in the original statement of the objectives, the final statement merges the generation and validation phases so that the information presented has been revised in the light of validation activities.

Background and roles

A. How recruited and involved

Each teacher training institution prepares a proposal to submit to SED following the broad guidelines provided by SED for the position of Area Facilitator. One Area Facilitator is selected by the institution to fill the position

after the proposal has been funded (although the individual may be identified in the proposal itself.) Area Facilitators are members of the faculty of the institutions receiving funds for the Area Facilitator position. As such, they continue to have teaching and related responsibilities in the field of vocational education.

This method of recruitment emphasizes liaison with the major teacher training institutions, and their facilities, rather than only with individuals. This helps assure that new vocational teachers will become thoroughly familiarized with ISSOE before they start their teaching.

B. Intended role practice

The ISSOE Manual lists the following services as provided by Area Facilitators:

1. Assist Coordinators with implementation of regional work plan.
2. Identify formal inservice needs and provide or make recommendation for provisions.
3. Troubleshoot problems surfacing in area to Regional Coordinators and/or SED.
4. Make periodic visits to field and attend or conduct state meetings as scheduled.
5. Serve as liaison among Coordinators with area.
6. Submit periodic reports to SED.
7. Participate in assessment conducted by research and development institutes.
8. Work cooperatively with other teacher education institutions which service other areas.
9. Conduct summer inservice workshops for teacher participants.
10. Conduct workshops as necessary on special topics for support of teachers and Regional Coordinators.
11. Arrange for college credit for ISSOE participating teachers.

C. Current actual role practice

Area Facilitators were found to be involved in many of the responsibilities listed for them in the ISSOE Manual. Since a proposal for an Area Facilitator position must follow the broad guidelines provided by SED, and each occupant of the position must submit a final report detailing activities covered under a proposal, it is not surprising to find agreement between formal responsibilities and reported role practices. However, flexible adaptation of the role to meet the demands of the position within each context is both necessary and expected, and evidence of this flexibility was also found. This fact makes it difficult to generalize over the three Facilitators in terms of their current role practices. For this reason the following items may refer to three, two or only one Area Facilitator.

Another reason for differences among Area Facilitators is that their time allotments for ISSOE, specified in the proposals from their institutions, vary depending on their circumstances. In general, Area Facilitators have been funded for fifty percent time. However, in one area the Area Facilitator is actually twenty-five percent time, but the budget for the area provides for an assistant. Another Area Facilitator is assisted by a faculty colleague who works with teachers in one region within the area. The other Area Facilitator has had teaching responsibilities reduced and is now close to full-time on ISSOE.

The following current role practices were identified. They are organized into four major headings. These are:

1. Activities relating primarily to Regional Coordinators;
2. Activities relating primarily to SED and/or affiliated organizations (e.g., CIOE);

3. Activities relating primarily to the interaction or to relay information between SED to Regional Coordinators; and

4. Activities relating primarily to teachers, teacher education colleagues and students.

The first three headings are primarily concerned with the explicit role of Area Facilitators as serving in a support position between Regional Coordinators and SED. The last heading is less directly concerned with this aspect of their role. However, the activities listed below are not necessarily arranged in order of importance. Again, these items do not necessarily refer to all Area Facilitators.

1. Activities related to Regional Coordinators

- Area Facilitators hold area-wide meetings with Regional Coordinators from within their areas. The frequency of these meetings varies but is not more than quarterly. Meetings may be held at the teacher training institution. In Area C, however, meetings are held at a vocational school that is accessible to the four regions in the area. The meetings are routinely attended by Regional Coordinators as part of their intended role. In addition, SED personnel or other outside resource persons may occasionally attend.

  In some instances, area-wide meetings provide the major contact between Area Facilitators and Regional Coordinators outside of state-wide meetings in Albany. Thus, these meetings are important opportunities for providing technical assistance. However, Area Facilitators also meet many Regional Coordinators on an individual basis and provide assistance to both the Coordinators and their teachers.

Of course, Area Facilitators do not travel to each of their regions with equal frequency; nor do each of the three Area Facilitators visit their Regional Coordinators with equal frequency. Although one Area Facilitator stated a preference to meet Regional Coordinators in their regions, differences between Area Facilitators are at least partially due to different time and distance constraints.

A mixture of semi-formal presentations and unstructured discussions of problem areas occurs at area-wide meetings. One of the matters open for discussion is the generation of topics for future State meetings. These inputs are reviewed by SED personnel for possible inclusion in future agendas.

- Area Facilitators make resources (including consultants) available to Regional Coordinators to assist them in making presentations on ISSOE to participating ISSOE teachers or other interested groups. They may conduct workshops for orientation to ISSOE and to competency-based vocational education (CBVE) in general. These workshops are conducted in the regions at the request of Regional Coordinators.

- Area Facilitators serve as a "resource" for Regional Coordinators in other ways. For example, they may provide suggestions for working with teachers and for curriculum development. They also assist in orientation of new Regional Coordinators in ISSOE. These services are fulfilled through area meetings and field visits to find out what technical assistance is needed. Area Facilitators occasionally assist Regional Coordinators by clarifying assignments. If necessary, questions are

relayed to SED for further clarification. As a general comment, since technical assistance demands vary from region to region, the Area Facilitator's role as a resource is shaped to a great extent by Regional Coordinator's requests for assistance.

- Area Facilitators develop materials for use in the field. The materials include slide series and other types of media presentations on various facets of ISSOE, including the development of CBVE within an ISSOE format, and verification/validation of ISSOE curriculum materials.

- Other resource materials to aid instruction are also being developed for resource centers at each teacher training institution.

- One Area Facilitator employs a full-time assistant who is responsible for many activities connected with developing a resource center at the teacher training institution for use by Regional Coordinators, teachers and others. The Area Facilitator works closely with the assistant and delegates responsibilities that have to do with development of slide series, videotape presentations, and other support materials. The Area Facilitator has helped make these resources available to Regional Coordinators for their dissemination activities.

2. <u>Activities related directly to SED and/or affiliated organizations</u>

- Area Facilitators write annual proposals and budgets for the year's activities according to directions and guidelines from SED. The also prepare final reports on their activities for the funded period.

- Area Facilitators synthesize input from the regions regarding the addition of new curriculum materials to those already in ISSOE. These new materials originate from the Vocational Technical Education Consortium of States (VTECS). They have been purchased in order to expand the number of curriculum areas in ISSOE; but first, teachers working in the regions must provide their input for the modification of VTECS catalogs into ISSOE format. (This activity parallels the work done by the Bureau of Occupational Education Curriculum Development, SED, in integrating regional input on occupational areas already in ISSOE to form ISSOE catalogs.)

- Area Facilitators attend and provide input for planning future State Regional Coodinator meetings. SED personnel solicit and review this input prior to each State meeting. Their input includes presenting or reflecting the concerns of Regional Coordinators. Their participation at State meetings involves both formal presentations and discussion related to present or anticipated ISSOE activities. Finally, they participate with SED personnel in informal post-meeting discussions of the meetings.

- Area Facilitators have, on at least one occasion, served as a "resource" for SED on ISSOE. This occasion was an in-house workshop for SED personnel on present and future roles in ISSOE.

- The three Area Facilitators serve on a rotating basis as the editor for the ISSOE Newsletter. This activity includes solicitation and editing of articles and printing of issues.

- One Area Facilitator is arranging the printing for the state-wide validation through university printing facilities.

- Area Facilitators occasionally meet with SED and RCU staff for the purpose of sharing ideas and receiving updated information on research and development activities related to ISSOE.

3. Activities related to interaction between Regional Coordinators and SED

   - Area Facilitators serve as a support service between SED and Regional Coordinators. They do this by presenting problems and concerns of Regional Coordinators to SED, and in turn presenting procedures, materials and assignments, originating with SED, to Regional Coordinators. (However, Regional Coordinators and SED can, and do, interact frequently without using Area Facilitators as go-betweens.)

   - Teacher stipends are generally administered by Regional Coordinators. However, one Area Facilitator handles stipends for one of the regions. This special arrangement was made to facilitate the participation of the region (a municipality) in ISSOE.

4. Activities related to teachers, teacher education colleagues, and students

   - Activities related to teacher implementation of ISSOE were identified as important aspects of the Area Facilitator role. One Area Facilitator has addressed this issue in workshops that dealt explicitly with implementation. The focus of these workshops was on studying what is now in place that is working effectively, and identifying ideas and components to aid implementation efforts elsewhere.

A quite different approach has been emphasized by another Area Facilitator. This approach is to tie implementation in with achieving college credit. The approximately 90 teachers in the area who are working for college credit in conjunction with their participation in ISSOE have been given assignments related to implementation. These assignments require that teachers go beyond any requirements for their stipends as ISSOE teachers. Requirements are also structured to conform with the plans the Regional Coordinator has for his or her region.

- Area Facilitators provide college credit for teachers involved in ISSOE. The form these arrangements take varies from one institution to another, and the frequency of teachers' use of this opportunity also varies from one area to another and from one region to another. Some of the factors that influence this activity include: time and distance constraints on teacher travel, teachers' need for additional college credit, and availability of competing programs.

- Area Facilitators hold summer workshops for teachers, Team Leaders, and Regional Coordinators. The topics and sites vary from year to year. Area Facilitators provide some orientation and pedagogical elements of these workshops while arranging for consultants to provide technical occupation related information.

- Area Facilitators disseminate information about ISSOE to other teachers and educators, and familiarize students with ISSOE. They work with teacher educators on infusing ISSOE concepts into teacher training programs. Both preservice and inservice training is involved. This aspect

of their role is as a liaison between SED and the three teacher training institutions for purposes of wider dissemination of ISSOE and preparation of future teachers.

Formal and informal linkages

The following linkages were identified from the data on actual role practices. Only those linkages that appeared to cut across all three role incumbents are listed. Thus, for example, the linkage between one Area Facilitator and a support staff person is not listed because it is unique to that Area Facilitator's position.

Area Facilitators may be involved in other linkages related to their roles as Area Facilitators, but if so, these linkages did not appear in the data or did not appear to play a significant role. After the validation phase, two proposed linkages were deleted from the list and one other was added. The two deletions resulted from an Area Facilitator's comment that these items did not apply. The addition occurred as a consequence of events unrelated to the validation activities, i.e., the scheduling and occurrence of linkage E listed below. Linkages are listed and discussed in the light of other findings.

A. Area Facilitators occupy a support position between SED and Regional Coordinators (not a hierarchical arrangement). This linkage actually has two components, one with SED and the other with Regional Coordinators, but it is stated as one here due to the fact that the two are so closely interrelated. That is to say, interactions between Area Facilitators and Regional Coordinators frequently involve SED in some way; similarly, interactions with SED must deal often with Regional Coordinators. Of course, this "support position" is closely related to the Area Facilitator's official role of providing technical support services to Regional Coordinators. However, the above data revealed the role to involve much more than this official

characterization. This linkage-pair is crucial to ISSOE as it is presently organized.

B. Area Facilitators interact with ISSOE teachers (e.g., workshops and college credit). The actual (versus intended) importance of this linkage varies greatly among the three Area Facilitators. In one area, interaction with teachers in workshops and to receive college credit is a significant part of the role. In the other areas, while present, this linkage is not as significant. Also, an Area Facilitator's interaction with teachers from within a region appears to depend largely on requests for such interaction coming from the Regional Coordinator. Thus, the relationship with the Regional Coordinator is crucial in determining Area Facilitators' interaction with ISSOE teachers. How frequently this linkage occurs also depends a great deal on constraints on travel (e.g., time and distance) which, as stated earlier, vary from one area to another.

C. Area Facilitators also work with teacher education colleagues. Although this linkage was not stressed by any of the Area Facilitators it was not specifically contradicted by any. It is not a particularly salient linkage in the current role practice, but it is included as a potentially important one in the future. The linkage is theoretically important in view of the need to keep teacher education colleagues informed about ISSOE for the purpose of turning out new teachers who are prepared to participate in ISSOE. One circumstance that can affect the perceived importance of this linkage is the enrollment of current ISSOE teachers in courses offered by the institution, as part of their involvement with ISSOE. As stated above, this circumstance is a significant factor in only one area at this time. Despite the potential importance of this linkage, little information pertaining to it was obtained.

D. Area Facilitators engage in work with other Area Facilitators. They appear to interact with one another frequently at times such as meetings in Albany with SED and with Regional Coordinators, area meetings, summer workshops, meetings at Cornell, etc. No data was obtained on other modes of interaction, such as via telephone, letters, etc. However, there was evidence of working relationships that extend beyond the formal contexts provided by meetings.

E. Area Facilitators work with CIOE to discuss present and future research and development on ISSOE. This linkage appears to be a recent development arising from a concern to keep abreast of ongoing activities. The linkage does not involve actual participation in these activities, but rather is an information linkage. It involves sharing current ISSOE related ideas and activities. One example of this linkage was a meeting among SED personnel, Area Facilitators and CIOE staff at Cornell on January 29, 1980. At this meeting several current ISSOE research projects, including ISSOE Dissemination Phase II, ISSOE Field Test, and ISSOE Instructional Planning, were discussed. Input was obtained from Area Facilitators regarding each of these projects. This seemed to be a productive way to keep everyone up-to-date on ISSOE research and development activities as they occur.

Problems and concerns

As participants who are closely aligned with SED in its goal of implementing ISSOE, Area Facilitators work with a variety of individuals to achieve that goal. In this capacity, they become aware of a number of issues related to management of ISSOE. These issues are not to be confused with policy-making issues, and Area Facilitators do not confuse the two. As key participants with a stake in

ISSOE, they may well discuss policy matters, but they do not in any sense construe themselves to be involved in policy-making. The problems and concerns they expressed should be understood in this light.

Another qualification to the following discussion is that the three Area Facilitators are individuals whose concerns obviously reflect differences in background as well as differences between the three areas. The reader must bear in mind that such differences exist, but are not discussed in depth out of respect for confidentiality. Therefore, only a few of the most salient general concerns will be discussed. (It should not be assumed, however, that all Area Facilitators expressed these concerns or that those who did express them had identical points to make.)

One concern was the need to keep abreast of current research and development activities that affect ISSOE. Area Facilitators wanted to have advance knowledge of such activities so that they would be aware of the implications for their own efforts. The concern was not necessarily to have a hand in each research and development activity. (One response to this concern was a meeting to discuss current ISSOE research and development, held at Cornell University on January 29, 1980.)

Another concern was that the ISSOE system is now so large and complex that it cannot be effectively managed in the way that it has been managed. Problems appear to be dealt with as they occur in a crisis-mode. There appears to be little long-range planning to anticipate problems before they arise. Area Facilitators were concerned that although current methods may resolve a problem temporarily, they do not appear to be farsighted enough.

A third concern was with the delays in printing materials in Albany, and with the problems that these delays create for effective public relations concerning ISSOE. Of course, other management-related problems can have the same sort of public relations consequences. Area Facilitators are concerned that such problems will erode the credibility of ISSOE and place them in a defensive position in dealing with the public about ISSOE.

General management and evaluation issues

As participants who are closely identified with the total ISSOE system, Area Facilitators' concerns are large concerns. All of the above concerns (i.e., research and development, long-range planning, and delays in printing materials) are related to the present and future dissemination and management of the ISSOE system. Evaluation concerns were less implicit in their remarks. The evaluation of workshops, teachers' college credit options, and other specific activities in which they are involved, are all relevant concerns.

Since ISSOE Dissemination, Phase II did not specifically address these issues, their implications cannot, as yet, be assessed. However, the findings for Area Facilitators and other roles in ISSOE (which follow) provide an appropriate context for understanding the constraints under which key participants must function. The future investigation of management and evaluation issues should be fully cognizant of this context.

REGIONAL COORDINATORS

Background

The Regional Coordinator role, a key role in the ISSOE system, was well-represented in this study. Close to a one hundred percent sample of the sixteen Coordinators in the state participated in either the pre-validation (Objectives 1 and 2) or validation (Objective 3) phases of the study, or both. In addition to providing crucial information as to their own role, they provided contacts with other participants and contributed important information on other roles.

The information that is presented below represents a variety of points of view, regional differences, and a variety of other differences that it would be impossible to fully reflect in this report. Nevertheless, there was also enough consistency within the information gathered to make possible reasonable summary statements of various role activities, concerns, etc. It is hoped that some of the variety will also be apparent to the reader. Also, because the Coordinator role is important, it is hoped that the following will serve as a useful introduction to other findings presented in this report.

Methods for Objectives 1 and 2

The initial phase of the investigation involved conducting face-to-face interviews with six Regional Coordinators. The rationale and methods were the same as used for Area Facilitators.

A semi-structured format was used to elicit varied responses within the context of questions tied to Objective 1 (role descriptions, contributions, linkages, etc.) and Objective 2 (problems and concerns). For example, such questions as the following provided information relevant to current role practices:

- What people in the LEA do you work with?
- Besides people in the LEA, who else do you work with concerning ISSOE?

In addition, other questions such as the following provided a background in order to make the information more understandable:

- How did you become a Regional Coordinator?
- What's your background?

In general, somewhat greater structure was imposed on Coordinator interviews in order to permit greater generalizability across all respondents. All questions in the interview guide for Regional Coordinators are included in Appendix A.

The respondents represented a fairly representative sample of Regional Coordinators, with one from Area A, three from Area B, and two from Area C. With the exception of one interview conducted at Cornell, all others took place at, or near, the offices of the respondents. Interviews were conducted by one or two researchers assigned to the project. All but one of the interviews were recorded.

From the interview protocols, a procedure similar to that used for Area Facilitators was followed to abstract the most significant information related to the objectives. The two researchers most familiar with the interview content discussed each interview to reach consensus as to the most significant information in light of the objectives. Patterns of responses, and corroborative evidence from other sources, were emphasized as criteria to facilitate formation of consensus.

The first parts findings were organized into the three-part framework proposed in the preliminary report. That is, information on Background and roles was organized under the subheading, "How recruited and involved," "Intended role practices," and "Current role practices." Formal and informal linkages and roblems and concerns were the other two parts of the framework. The same outline will be used below to organize and facilitate review of the findings.

The sections listed above are related to the major objectives as follows. The first parts provide background information and a context of intended role practices that helps make the current role descriptions (Objective 1) more meaningful. The third part is directly related to Objective 2 (problems and concerns).

Method for Objective 3

Objective 3 (validation of preliminary results) followed immediately from the first two objectives in the actual conduct of the study. The results reported below are the findings as validated.

Actual validation was conducted in the following manner. From the categories devised to organize the major preliminary findings, items were constructed to form a validation questionnaire (Appendix B). These items were designed for easy, yet accurate, self-reports related to the objectives. (The response format is discussed in more detail with the findings below.) Regional Coordinators were contacted by phone and asked to participate by completing and returning a questionnaire to be sent from Cornell. All agreed at least tentatively. Thirteen completed questionnaires (out of 16 Regional Coordinators) were received.

Findings for Objectives 1, 2 and 3

Background and roles

A. How recruited and involved

A sample of thirteen Regional Coordinators who responded to the validation questionnaire provided responses to a selection-type question on the role of the individual who recruited him or her to be a Coordinator. The responses "Dean" and "Program Chair" were not selected; the response "SED" was given only once. Of

the six remaining responses given, two indicated their occupational education directors, two indicated a regional selection committee for occupational education, one listed "personnel," and one listed former contacts at the area's teacher training institution. These data appear to confirm the finding that Regional Coordinators enter their position in a variety of ways.

Earlier interviews indicated that there are a number of Coordinators who do not have a vocational background and who have not taught in vocational schools, as well as a number who do have such a background. The validation questionnaire did not attempt to confirm this general finding, nor precisely document the numbers from each type of background. It was felt that this point was already well-known among ISSOE participants and therefore, not in need of further documentation. Similarly, earlier data suggested that several Coordinators served previously in counseling and guidance or as curriculum coordinators; but again, no attempt was made to provide further documentation of this point.

Other background information that sheds light on Coordinators' involvement with ISSOE includes responses on the validation questionnaire pertaining to total time spent with ISSOE and percent of full-time spent as a Coordinator. Of ten respondents to the item, "total years and months with ISSOE," the average time indicated was approximately 1.9 years. Even without data from Coordinators who did not respond on the questionnaire, it is apparent that the typical turnover rate among Regional Coordinators is rather high.

Most Regional Coordinators are involved on a full-time basis. The modal response to the item, "Percent of full-time spent as Coordinator," was 100 percent.

B. Intended role practices

Currently there are 16 Regional Coordinators, each of whom serves in one of the 13 regions in the State. Regions 1, 3 and 12 are divided into two parts, each of which is served by a different Coordinator.

The ISSOE Manual specifies the following duties for Regional Coordinators as key agents in the delivery system.

1. Organize a regional delivery plan and introduce that plan to districts within their regions.
2. Within the delivery plan enlist the fullest possible participation of teachers new to the modularized curriculum system.
3. Oversee development of new curriculum packages and encourage utilization of completed packages by teachers within regions.
4. Establish close working relationship with local administrators, guidance, counseling and placement staffs.
5. Provide measures throughout the region which work toward elimination of sex-role stereotyping in curriculum.
6. Meet regularly with participating teachers within regions.
7. Supervise input and feedback from student reporting system to assure that the system operates as per plan.
8. Articulate with post-secondary institutions regarding development and utilization of the statewide curriculum system.
9. Participate in research and/or cost-effectiveness studies.

10. Cooperate with the State Education Department in development of the statewide project.

11. Direct working groups toward adaptation of entry-level modules to the needs of specific minority, disadvantaged, and linguistically or otherwise handicapped students.

12. Make recommendations for future development of ISSOE programs.

13. Initiate and maintain regional validation procedures through utilization of Advisory Committees.

14. Identify specific inservice needs of teachers developing and implementing ISSOE materials and secure institutional or consultant support services to respond to these needs.

15. Provide monthly reports on regional activities initiated for ISSOE.

C. Current actual role practices

The following role practices were identified within the sample of Regional Coordinators initially contacted. In the validation phase, a questionnaire was designed to test the validity of the conclusion that these are salient current role practices (see Appendix C). These data are summarized (see Table 1) in terms of the average rated importance of each role practice. A five-point scale was used where 1 = unimportant, 2 = slightly important, 3 = somewhat important, 4 = highly important, and 5 = absolutely essential. The other number accompanying the average rating is the standard deviation, which provides an estimate of the variability among Regional Coordinators' responses.

Another important estimate was obtained for the time devoted to each activity. Since the questionnaire itself did not state explicitly that the universe of comparison was ISSOE time (and

Table 1

Data from Regional Coordinators concerning Importance of Current Role Practices

ROLE PRACTICE	AVERAGE RATING	STANDARD DEVIATION	TIME SPENT/ RANKING
1. Recruitment and Retention of Teachers	4.8	.68	1 (most)
2. Dissemination of ISSOE Materials	4.6	.83	3
3. Making Presentations of ISSOE	4.7	.59	5
4. Design and organization of local infrastructure	4.7	.76	4
5. Respond to various SED requests	3.8	1.08	2
6. Prepare and administer annual budgets	3.5	1.16	7
7. Participate in ISSOE research activities	2.9	1.19	8 (least)
8. Attendance of area and state meetings	4.0	1.31	6

n = 13

some Coordinators do not spend 100 percent of their time on ISSOE) the average percents given could be somewhat misleading. Therefore, the estimate reported is the average of the rank of each activity. For example, if a Coordinator responded with a greater percent time for an activity than for any other activity, this response was converted into a rank of "1" for that Coordinator; and similarly, every response for every Coordinator was converted into a rank. These data then reflected the relative priority given to the activity by each Coordinator. These ranks were then averaged over Coordinators to obtain overall ranks in comparison with the other activities listed. All of these data are summarized in Table 1.

Each role activity listed will also be briefly discussed below. The following, then, are the role activities identified:

1. Recruitment and retention of teachers (average rating = 4.8, standard deviation = .68).

   The average rated importance of this activity was higher than that of any other activity. The average time devoted to the activity was also higher than for any other activity. Obviously, recruitment and retention of teachers is extremely important in ISSOE, and Regional Coordinators accordingly place a high priority on the activity. (They are also charged with that specific responsibility.)

   However, some variation in the manner of recruitment activity was revealed by our investigation. Some Regional Coordinators attempt to recruit each year through presentations and face-to-face contacts. Retention may involve brief, informal contacts in the Fall of each year (e.g., "Going to be on board this

year?"). Others are now delegating some of this responsibility to their Team Leaders, or rely more on recommendations of occupational education administrators, to obtain new recruits.

2. Dissemination of ISSOE materials to participants in ISSOE (average rating = 4.6, standard deviation = .83).

   The average rated importance of this activity also was high, and the average time devoted to the activity ranked third among all other activities listed. As the item was written, the responses probably refer mainly to the distribution of catalogs, materials necessary for assignments, and the like. Another element in these responses, however, is probably the activity of disseminating information about ISSOE to past or potential participants for maintaining and increasing ISSOE participation. Coordinators' materials for these dissemination efforts either originate with SED or are produced regionally. Again, the importance of recruitment and retention may be reflected somewhat in the responses.

3. Making presentations of ISSOE within local regions (average rating = 4.7, standard deviation = .54).

   Although this activity was tied for second in rated importance, the time devoted to the task was only fifth among all activities. The time devoted to this task, while not great, is obviously regarded as crucial. Presentations made by Regional Coordinators include workshops for ISSOE teachers, informal consultation with LEA personnel, and formal introductions of ISSOE to community groups and councils.

4. Design and organization of own local infrastructure (average rating = 4.7, standard deviation = .76).

This activity was tied for second with the previous activity in average rated importance. The time spent on the activity ranked fourth among all activities.

Recently, the concept of "team leaders" has been incorporated into the local infrastructures of a number of Regional Coordinators. The positions of teachers and administrators recruited for this role varies with local circumstances. Of course, these individuals require Coordinators' time for orientation and training. (As a significant new role in ISSOE, Team Leaders will be discussed in a later section.)

5. Respond to various SED requests (average rating = 3.8, standard deviation = 1.08)

Coordinators gave this activity a moderate rating in importance. Since most other activities were rated higher, however, its rank in average importance was only seventh. The time devoted to SED requests was second only to recruitment and retention.

The variety of requests from SED deal primarily with the assignments for curriculum development and local validation/verification of curriculum materials. Other requests have dealt with instructional materials, SED research and monitoring activities, and the like.

6. Prepare and administer annual budgets (average rating = 3.5, standard deviation = 1.16).

Coordinators also gave this item a moderately high rating in importance. However, the average time devoted to budget matters ranked only seventh in comparison with the other activities. Thus, budget matters are perceived as necessary and important, but are probably fairly routine matters for Coordinators. They need to follow budget guidelines and instructions from SED to take care of teacher stipends and other budget matters as needed. Although there are occasions for exercising discretion, these matters apparently do not take much time.

7. Participate in ISSOE research activities (average rating = 2.9, standard deviation = 1.19).

This activity was given the lowest rating in importance, and also ranked lowest in time required. For several Regional Coordinators, the ISSOE Dissemination research was practically the only request for their time for research related to ISSOE, despite the fact that one explicit intended role practice involved participation in research studies. However, Regional Coordinators have participated in ISSOE-related research sponsored by SED. One study, for example, dealing with the Regional Coordinator linkage system was carried out by Craig (1978).

8. Attendance at area and state meetings (average rating = 4.0, standard deviation = 1.13).

Coordinators attend area and statewide meetings for Regional Coordinators whenever these meetings are scheduled. These

activities are rated moderate in importance. (The moderately high rating of most respondents was reduced by low ratings of a few respondents.) This activity does not receive a large proportion of Coordinators' time.

9. Other activities.

In addition to these activities, several respondents listed other activities in the space provided for that purpose. Some of these responses could be included with those reported above, such as: assist teachers with writing assignments and conducting workshops. Other responses included: assisting teachers with implementation, preparing monthly and annual reports for SED, serving as a resource person to district and school personnel, and making conference presentations.

In summary, Regional Coordinators were found to be involved in many activities as listed in the ISSOE manual. The most important activity categories appear to be: recruitment of teachers, dissemination of materials, making presentations of ISSOE and design and organization of their own local infrastructure. Time spent on activities did not necessarily correlate with rated importance. For example, making ISSOE presentations was rated highly important but time devoted to these activities was not great; responding to SED requests was time-consuming but rated only moderately in importance. Responses were reasonably consistent across regions; there were some respondents whose ratings for some items were at variance with the majority.

Formal and informal linkages

Linkages were abstracted from previous interview data on current role practices. Only those linkages that appeared to be significant

aspects of the role across the majority of Regional Coordinators are listed. Participation in research activities (e.g., SED/BOER, CIOE or IRDOE) was not listed because, although all were participants in the present study, this activity was not emphasized as a significant aspect of the role.

According to the data, then, the major linkages identified for Regional Coordinators were the following:

A. Attend area and state meetings

This is stated as a separate linkage because it provides the opportunity for interactions among multiple role players in a structured arrangement with mandatory attendance for each participant.

B. Work with community groups and councils

Regional Coordinators work with these groups and councils for the purposes of presenting information about ISSOE, obtaining local support, serving as a resource person, conducting validation of ISSOE curriculum, etc.

C. Act as an interface between SED and the LEA

Regional Coordinators are the most important linkage between SED and LEA administrators for providing information about ISSOE. (This point is specifically documented in the section on Directors of Occupational Education.) They interact with administrators with regard to budget matters, ISSOE teacher participation, and any problems related to the local administration.

D. Provide informal linkages with SED, Area Facilitator, and other Regional Coordinators

Regional Coordinators interact with these key participants in ISSOE outside of the formal meeting context. Telephone, letter and memoranda exchanges take place frequently. Regional Coordinators from adjoining regions sometimes come together to cooperate in various ISSOE activities. Regional Coordinators from regions close to their Area Facilitator are more likely to meet them on a regular basis. Similarly, Regional Coordinators located close to Albany are more likely to have informal face-to-face contacts with SED staff.

E. Work with Team Leaders

This is a relatively new linkage which has not been developed in all regions but is listed here as a potentially important linkage. Among those who responded to the question, "How many Team Leaders are operating in your region?" the range was from zero to twenty-two.

F. Work with ISSOE teachers and other participants in the LEA's

This is the most important linkage in terms of the delivery of ISSOE to the local setting. The information that teachers receive most regularly and frequently about ISSOE comes from their Regional Coordinator. Similarly, others at the LEA's who are affected by ISSOE (such as guidance counselors) are dependent upon their interactions with the Regional Coordinator for most of their information about ISSOE.

In summary, evidence on linkages confirmed the official characterization of Regional Coordinators as "key agents" in the ISSOE system for the delivery of competency-based curriculum and instruction to

local vocational schools. They are the major providers of information and resources for involving individuals locally in ISSOE. They have a key role in working with local administrators, team leaders and teachers. For the most part, the impact of other participants such as SED staff and Area Facilitators depends on working through the Regional Coordinator.

Problems and concerns

In the early interviewing stage, four main areas of problems and concerns were noted. These are simply categorical headings for organizing the diverse interview responses in a convenient, understandable fashion. They were determined by consensus among two researchers who were familiar with the interview data. Several different concerns fall into these categories as illustrated below. Brief comments of Regional Coordinators were elicited under each item on the questionnaire to indicate what concerns (if any) they had experienced that were similar to, or actually among those listed. Upon examination of the responses elicited, it is obvious that many responses under different headings were closely related. These comments are synthesized and summarized under each topical heading, and finally, all material in this section is summarized together.

A. Role definition

This item refers to the need for direction and guidelines, especially for new role occupants; the concern over job security; the turnover rate; and related matters. Of the twelve Coordinators who responded to this item, three stated that there were no difficulties of this type. The other concerns mentioned varied widely. For example:

- new role occupants need adequate inservice preparation (two responses)
- problems decrease with experience (one response)
- more problems with increased number of program areas (one response)

B. Budgeting

This item refers to remuneration for teachers; justification of ISSOE to administrators; equity of distribution to regions, and the like. Ten of the twelve who responded to this item reported concerns. The responses included the following:

- insufficient teacher stipends in comparison with amount of work
- need for more money for consultants
- unnecessary duplication due to delays in receiving materials
- delay in specific results (e.g., catalogs)

C. Involvement of teachers

This item includes such matters as answering teachers' concerns, dealing with teachers' frustration, use of teacher input, recruitment, and the like. This item elicited a variety of strong reactions. One Coordinator began, "This is my biggest frustration--all of the above." Another wrote only, "Has caused much difficulty!"

Some of the responses focused on the teacher's concerns related to their involvement rather than the Coordinator's concerns. Among teacher's concerns mentioned were:

- need to be convinced of the value of a system such as ISSOE
- frustration when work does not appear in new catalogs

- not understanding how to implement ISSOE tasks in the classroom
- not knowing how to verify students' competency attainment in large classes
- need for more administrator support

It is difficult to generalize over these responses since they speak to so many different kinds of concerns. Although the focus was on teachers' concerns, the clear implication is that Regional Coordinators seek solutions to these problems in order to get teachers involved. The teachers' concerns are also their concerns.

Responses that dealt more explicitly with the Regional Coordinators' concerns were the following:

- time required to train teachers
- constant influx of new teachers
- need for Team Leader-supervised workshops to deal with teacher concerns
- need to enhance recruitment by a nominal stipend

D. Logistics

This item included paperwork, travel demands, setting up meetings, and delay in the receipt of materials. The single most frequent comment, made by nine of the twelve who responded to this item, referred to delay in receipt of materials (catalogs and/or assignments) as a liability to the project. Other problems were mentioned that stem directly from these frequent delays:

- difficulty in planning or need to change schedule (five responses)
- difficulty in recruitment and retention of teachers (three responses)
- need to spend extra funds for duplication (one response)
- difficulty in completing the assignments (one response)

Many of these responses suggested that delays are a serious and frustrating problem. One stated that the whole procedure for developing materials should be reorganized. One response, however, was "no serious problem."

Other responses to this item included excessive paperwork (two responses), travel demands (three responses), and need for an area-wide approach as opposed to a statewide approach (one response). One respondent had no problems in this area.

In summary, the logistics of the ISSOE program in its present stage is a salient area of concern. Specifically, the problems of most concern are located within the system of making materials available for teachers to carry out the required assignments. These delays are apparently experienced widely across the state, and create new problems for the Coordinator in terms of recruitment and retention of teachers. The frustration mentioned by some Coordinators is understandable in that their job of "selling" ISSOE to teachers has been made more difficult by these delays.

E. Staff training

This item is exemplified by curriculum writing concerns, making CBVE meaningful to teachers, and training team leaders. A variety of responses were made by the ten who responded to this

item. Two stated that this was not a concern in their regions. At the other extreme, one expressed the need for monthly staff training. Other responses were:

- too many time commitments interfering with staff training (two responses)
- teacher reluctance to write curricula and generally low aptitude for it
- late delivery of materials

F. Assignments

This item includes concerns over deadlines, instructions, and terminology used in assignments. Of the twelve who responded to this item, only one found no concerns. Responses to this item included the following:

- problems meeting deadlines (five responses)
- amount of work required (two responses)
- inconsistencies in definitions of key terms (four responses)

Instructions were not as strong a concern in this group. Two mentioned the splitting of task sheets into components as a difficult instruction.

G. Other problems

This item was simply an open-ended category for concerns not commented on earlier. Six Coordinators took the opportunity to respond to this item. Their extremely varied responses are briefly summarized below:

- need to set new directions in light of past experience
- concern with paperwork required by teachers to list instructional resources
- need to reconsider Coordinators' other commitments in setting deadlines
- problems in adapting the "student competency record" in a shop situation
- exclusion of teacher input on task sheets
- need for a stipend to defray teachers' expenses

In summary, the results of the validation questionnaire appear to confirm the initial finding that each of these categories contains matters of significant concern to many Regional Coordinators. The concerns that elicited the strongest and most consistent reactions were: (A) problems of getting teachers involved and answering their questions, (B) delay in receipt of materials, (C) difficulties in planning, (D) problems of meeting deadlines, and (E) ambiguity in assignments. These problems were interrelated. For example, delay in receipt of materials created problems for some Regional Coordinators in maintaining their schedules and meeting deadlines. In turn, assignments, delays and other difficulties created problems for motivating and involving teachers.

General management and evaluation issues

The validation questionnaire items did not specifically mention management or evaluation as issues for respondents to consider. Nevertheless, considerable input was provided regarding management by respondents. In fact, many of the areas of problems and concerns listed on the questionnaire are essentially management areas. Therefore, when discussing these areas respondents mentioned such management problems as the following:

- unnecessary duplication delays due to delays in receiving materials
- the time required to train and keep teachers moving forward
- difficulty in planning and need to change schedules due to delays
- need to set new directions in light of past experience in ISSOE
- need to provide thorough training for a new Coordinator
- need for an area approach to ISSOE

Obviously, Regional Coordinators have specific concerns regarding ISSOE management. Their concern for evaluation is less clear since this was not an area specifically addressed by the validation questionnaire. However, inherent in such responses as:

- not knowing how to verify students' competency attainment in large classes;
- problems in adapting the "student competency record" in a shop situation;
- need to evaluate what is working and what is not in ISSOE;
- need to reevaluate the Coordinator's role.

are evaluation-related concerns. It is anticipated that the proposal for Phase III of ISSOE Dissemination will reveal important information regarding evaluation since its primary focus is ISSOE implementation at the local level.

DIRECTORS OF OCCUPATIONAL EDUCATION

Background

Directors of Occupational Education obviously have a key role in the implementation of ISSOE. As Phase 1 research revealed, administrator support on the local level is an essential factor in the implementation of any innovative education program. The importance of their input into ISSOE, and occupational education research and development in general, is evident. Each year, CIOE hosts an Occupational Education Conference which provides the opportunity for this critical input from the field. This report, however, represents the first systematic attempt to investigate the perceptions Directors have of their roles in ISSOE.

Methods for Objectives 1 and 2

The initial phase of the investigation involved conducting face-to-face interviews. The rationale and methods were the same as used for other roles as reported earlier in this report. A semi-structured format was used to elicit varied responses within the context of questions tied to Objective 1 (role descriptions, contvibutions, linkages, etc.) and Objective 2 (problems and concerns). For example, such questions as the following provided information relevant to current role practices:

- What is your role as Director of Occupational Education in relation to ISSOE?
- Whom do you work with?

Such questions as the following provided information relevant to problems and concerns:

- What kinds of problems do you have in your role with ISSOE?
- Do you have any recommendations to solve these problems?

The entire interview guide is included as Appendix C.

Interviewees were contacted through Regional Coordinators and interviews were conducted in conjunction with site visits to interview Regional Coordinators. No attempt was made to assure that the Directors interviewed were "typical" of ISSOE Directors.

All interviews were recorded, and interview protocols were analyzed by two researchers in order to abstract the most significant information related to the objectives. After the two researchers had independently familiarized themselves with the interview content, they discussed each interview to reach consensus as to the most significant information in light of the objectives. Patterns of responses, and corroborative evidence from other sources, were emphasized as criteria to facilitate formation of consensus.

The tentative findings were organized into the framework proposed in the preliminary report. That is, information on Background and roles was organized under the subheading, "How recruited or involved," Intended role practices," and "Current role practices." Formal and informal linkages, and problems and concerns were the other parts of the framework. The same outline will be used below to organize and facilitate review of the findings.

The sections listed above are related to the major objectives as follows. The first parts provide background information and a context of intended role practices that helps make the current role descriptions (Objective 1) more meaningful. The third part is directly related to Objective 2 (problems and concerns).

Methods for Objective 3

Validation of preliminary results was conducted in the following manner. The validation questionnaire was developed from the interview

responses in the same way as was done for other roles. First, the recurring patterns in role descriptions, linkages and concerns were listed. These were converted into questionnaire items in a manner designed to facilitate responding while conveying the intended meaning as accurately as possible. The same mixture of selection and open-ended items was used; i.e., importance and time requirements of various possible role activities were indicated by ratings while problems and concerns were discussed in a more open-ended way. The validation questionnaire is included as Appendix D.

The preliminary phase revealed that some directors would not be sufficiently informed about ISSOE to complete the questionnaire. Therefore, key SED/ISSOE staff provided nominations of thirteen directors whom they believed to be most knowledgeable about ISSOE. No evidence was available as to how representative this sample was. It was judged to be more important to have informed respondents than to be assured that the sample was representative.

Findings for Objectives 1, 2 and 3

Background and roles

A. How recruited and involved

A sample of thirteen Directors of Occupational Education was nominated by SED personnel as being among among the most knowledgeable about ISSOE. They were asked to indicate which category of ISSOE participant was the most helpful in keeping them informed of ISSOE development. They were given the choices: SED, Regional Coordinators, Area Facilitators, CIOE, IRDOE and Other. Of these thirteen respondents, eleven selected "Regional Coordinator." Two of these eleven also selected "SED." Another individual selected "SED" alone,

and still another individual selected "Area Facilitators." It thus appears that these Directors rely mostly upon their Regional Coordinator to keep them abreast of developments in ISSOE. Other sources of information are much less salient to this group of respondents.

Certain factors bring about a degree of formal involvement with ISSOE, such as mandatory identification of ISSOE on annual budget priorities, funding of Regional Coordinators, and involvement with components of ISSOE now being field-tested. They are not formally "recruited" in that their involvement with ISSOE occurs as a consequence of their formal position as a director and not through assuming a different position. Recruitment into a voluntary phase of ISSOE participation, such as participation in the ISSOE Field Test, has occurred at the invitation of CIOE with the use of Area Facilitators as an intermediary.

B. Intended role practice

Roles of Directors and Supervisors have never been formally defined vis a vis ISSOE. The type and degree of involvement cannot be easily standardized due to large differences between sites in their local involvement.

C. Current role practices

The following role practices were identified within the small sample of Directors of Occupational Education and Supervisors initially contacted. In the validation phase, a questionnaire was designed to test the validity of the conclusion that these are indirect salient role practices (see Appendix D). These data are summarized in terms of the average rated importance of each role practice by thirteen Directors. A five point scale was used where 1 = unimportant, 2 = slightly important,

3 = moderately important, 4 = highly important, and 5 = absolutely essential. The other number accompanying the average rating is the standard deviation, which provides an estimate of the variability among Directors' responses. All of the data recovered from the questionnaires are summarized and displayed in Table 2 below.

Only two respondents listed an activity in the "Other" category. One activity was listed as "encourage staff participation," and was given a rating of "5." The other activity, also given a "5" rating, was specified as "ISSOE/Curriculum Development workshops for entire occupational education staff at this B.O.C.E.S."

Summarizing the above information, in all activities with the exception of the last, there was a great deal of variability in the responses. In general, the average ratings indicated that the activities identified in the early field work were perceived to have at least a moderate amount of importance. Supporting the conclusion that Regional Coordinators are the most important source of information about ISSOE, it was found that the activity perceived as most important was working with Regional Coordinators. This comes as no surprise since the Regional Coordinator is the one person who is most responsible for dissemination of ISSOE within his or her local region; and in order to accomplish their goal they must interact frequently with occupational education directors. In contrast, Directors rate working with Local Advisory Councils as the least important activity. Local Advisory Councils are groups of persons selected because of their knowledge and expertise in certain areas to advise educators regarding vocational programs. At this stage in the development of ISSOE, Directors

Table 2

Data from Directors of Occupational Education concerning Importance of Current Role Practices

ROLE PRACTICE	AVERAGE RATING	STANDARD DEVIATION
1. Work with local ISSOE advisory councils.	3.1	1.20
2. Organize staff ISSOE development activities.	3.5	1.22
3. Provide ISSOE-related curricular support and guidance.	3.7	1.27
4. Review ISSOE and VTECS materials with teachers.	3.3	1.32
5. Prepare ISSOE budget with SED.	2.9	1.55
6. Work with ISSOE Regional Coordinators.	4.7	0.62

n = 13

apparently find that their most critical concerns regarding ISSOE cannot be answered by these individuals, whose function relates more to technical issues rather than to implementation of ISSOE.

Formal and informal linkages

Linkages were abstracted from the early interview data on current role practices, and were later validated by means of the same questionnaire used to validate role practices. According to these data, linkages identified for Occupational Education Directors and Supervisors were:

1. working with Regional Coordinators;
2. working with Local Advisory Councils;
3. working with teachers in their area;
4. working with SED concerning budget.

Based on the data regarding role practices, linkage 1 is perceived as the most important linkage in terms of information that is provided on ISSOE. Linkage 2 is probably the least important, and is not a salient feature of ISSOE involvement for all Directors. (One Director's comment was "Do they exist?".) The data suggest that the other two linkages occupy an intermediate position of importance.

Problems and concerns

In the early interviewing stage, four main areas of problems and concerns were noted. Again, these are simply intended to be categorical headings for organizing the diverse interview responses. It is obvious that many responses under different headings were closely related. Comments elicited in the validation questionnaire are synthesized and summarized under each topical heading.

A. ISSOE materials

This item included concerns regarding development and validation of curriculum materials. Of the ten Directors of Occupational Education who responded to this item, five found no problems or concerns in this area. However, several problems were mentioned by the remainder of the respondents, including:

- time spent on validation and writing curriculum
- need for teacher guidance
- variable quality of local validation
- targeted job level
- time spent on validation and writing curriculum

In general, the validation phase found less evidence of concerns related to ISSOE materials than to any of the other categories of concerns.

B. ISSOE implementation

This item included concerns over the flexibility of ISSOE, its adaptability to certain areas, and the adequacy of funds and support materials. Of twelve Directors of Occupational Education who responded to this item, only two respondents did not report concerns in this area. The remaining responses covered a variety of different aspects of the general issue of implementation. They were:

- implementation takes too long (four responses)
- need for specific guidance in how to implement ISSOE curriculum (one response)

- need for money to purchase materials (one response)
- monitoring teachers by local supervisors (one response)

The flexibility and adaptability of ISSOE to certain areas were not mentioned. Apparently these are not salient concerns within this sample of respondents.

In summary, the concerns expressed in this area were quite diverse. We may infer, however, that the general issue of how to implement is a concern to respondents.

C. Concerns for teachers

This item referred to concerns over teachers' training requirements, their reaction to change, and their use of curriculum materials. Of Twelve respondents to this item, all reported concerns. Although concerns were diverse, a general focus on obstacles to teachers' classroom implementation was evident. The points raised were:

- ISSOE is not being implemented fast enough (four responses)
- amount of paperwork required is too great (one response)
- resistance to change (one response)
- need for inservice preparation (one response)

D. Relation with other roles

This item concerned relationships with individuals who have key roles in ISSOE such as SED personnel and Regional Coordinators. Of ten respondents to this item, none expressed problems or

concerns with their Regional Coordinator. This supports the other data that suggested Regional Coordinators are the single most important source of information on ISSOE for Directors of Occupational Education. All of the comments on the relationship with Regional Coordinators were explicitly positive; e.g., "We have an excellent Regional Coordinator" and "I believe that our Regional Coordinator has enhanced our ISSOE plan."

Comments on the relationship with SED were more varied. Some noted the need for more SED support and guidance. Others, however, expressed the opinion that there should be less direct SED supervision as opposed to local control over ISSOE. Some concern was expressed with what appeared to be delay in feedback from SED. (One respondent stated, however, that this apparent problem has eased considerably.) Two respondents' comments were to the effect that SED appears to be somewhat removed from the local context.

In summary, concerns over relations with other roles were restricted primarily to concerns over SED's role. With the exception of one mention of the Area Facilitator role, no other ISSOE roles were mentioned.

In addition to the above validation of the four categories of concerns that were identified earlier, five respondents made comments in the "Other" category. These comments, however, were anticipated by many of the above responses. They included the observations that SED appears to be too slow in providing feedback and supplying materials, that it is time for a new phase of ISSOE development, and that implementation in general is proceeding too slowly. One other comment was that a "model" of ISSOE would be useful in "selling" ISSOE.

General management and evaluation issues

The validation questionnaire items did not specifically mention management or evaluation as issues for respondents to consider. Nevertheless, considerable input was provided regarding management by respondents. In fact, the four main areas of problems and concerns listed on the questionnaire are essentially management areas. Therefore, when discussing these areas respondents mentioned such management problems as the following:

- Need more support from state and more time for teachers to develop procedures in how to properly implement.
- ISSOE takes too long from start-up to implementation.
- Time constraints on teachers during the instructional year continue to cause problems.
- Working staff at SED level is not adequate to cope with material developed in a timely fashion.
- See a need for money and materials to implement ISSOE.
- Requires a lot of paperwork to implement which causes teachers to hesitate getting involved.
- Cannot see the tie-ins between the SED and the local instructional programs.

Obviously, occupational education directors have specific concerns regarding ISSOE management. Their concern for evaluation is less clear since this was not an area specifically addressed by the validation questionnaire. However, evaluation-related concerns are inherent in such responses as the following:

- Local validation is of variable quality.
- Teachers really don't think there will ever be a total ISSOE curriculum.

- The need for monitoring by local supervisors of teachers who are using ISSOE material to determine the effectiveness in the teaching of students in those areas.
- Enough time for extensive teacher training will be required.
- Supervisors will need to be involved for the evaluation of implementation.

It is anticipated that the proposal for Phase III of ISSOE Dissemination will reveal important information regarding evaluation since its primary focus is ISSOE implementation at the local level.

ISSOE TEACHERS

Background

The teacher is obviously a key participant in ISSOE since it is the teacher who is ultimately responsible for the delivery of competency-based instruction to students. Yet little is known about the teacher's role as perceived by teachers themselves. This study is apparently the first attempt to provide systematic information of this type.

The number of teacher participants in ISSOE has grown tremendously in the last five years, and is now estimated to be approximately 2,000. It was obviously beyond the scope of this research to contact more than a small fraction of this number. The following details how teachers were contacted, the methods used to obtain relevant information, and the findings obtained.

Methods for Objectives 1 and 2

The initial phase of the investigation involved conducting face-to-face interviews. The rationale and methods were the same as used for other roles as reported earlier in this report. A semi-structured format

was used to elicit varied responses within the context of questions tied to Objective 1 (role descriptions, contributions, linkages, etc.) and Objective 2 (problems and concerns). For example, such questions as the following provided information relevant to current role practices:

- How did you become involved in ISSOE?
- What are the most important activities you have been involved in?

Such questions as the following provided information relevant to problems and concerns:

- Have you made any recommendations concerning ISSOE?
- What problems or difficulties, if any, have you with _____(one of the activities identified).

The entire interview guide is included as Appendix E.

Interviewees were contacted through Regional Coordinators and interviews were conducted in conjunction with site visits to interview Regional Coordinators. No attempt was made to assure that the teachers interviewed were "typical" of ISSOE teachers. Rather, the information they provided was used to generate hypotheses related to Objective 1 (role descriptions) and Objective 2 (problems and concerns) for further test in the validation phase that occurred later. The information was also cross-validated by comparison with data on teachers obtained from some of the other role participants interviewed.

All interviews were recorded, and interview protocols were analyzed by two researchers in order to abstract the most significant information related to the objectives. After the two researchers had independently familiarized themselves with the interview content, they discussed each interview to reach consensus as to the most significant information in light of the objectives. Patterns of responses, and corroborative evidence from other sources, were emphasized as criteria to facilitate formation of consensus.

The tentative findings were organized into the framework proposed in the preliminary report. That is, information on Background and roles was organized with the subheadings, "How recruited or involved," "intended role practices," and "current role practices." Formal and informal linkages and problems and concerns were the other parts of the framework. The same outline will be used below to organize and facilitate review of the findings.

Methods for Objective 3

Validation of preliminary results was conducted in the following manner. The validation questionnaire was developed from the interview responses in the same way as was done for other roles. First, the recurring patterns in role descriptions, linkages and concerns were listed. These were converted into questionnaire items in a manner designed to facilitate responding while conveying the intended meaning as accurately as possible. Teachers were also asked to estimate the percent of their ISSOE time spend on each activity. However, for many teachers it was unclear whether the basis for estimating percetn was their ISSOE time or their teaching time. Therefore this information was converted into ranks in order to determine which activities take up more of their time and which take up less time. The average for each activity then gives the average priority than an activity has in terms of teacher time. The same mixture of selection and open-ended items was used; i.e., importance and time requirements of various possible role activities were indicated by ratings while problems and concerns were discussed in a more open-ended way. The entire questionnaire is included as Appendix F.

Subjects in the validation phase were teachers who represented a variety of educational sites, program areas, years as teachers, and years in ISSOE. The sample was obtained by mailing packets of teacher questionnaires to Regional Coordinators. They were asked to have up

to ten teachers fill out the questionnaire and either return it to the Regional Coordinator or mail it directly to CIOE. Approximately 120 questionnaires were distributed to twelve Regional Coordinators. Fifty-six questionnaires were returned in time to be included in the sample. Several others were returned too late to be included in the analysis. Thus, nearly fifty percent of the questionnaires were returned. The method selected appeared to facilitate teacher participation and enhance the credibility of the research. At the same time, little control was possible over the selection, instructions, or conditions of test-taking. Despite these qualifications, the data were consistent and understandable and the sample appeared to represent a reasonable cross-section of teachers.

Findings for Objectives 1, 2 and 3

Background and roles

A. How recruited and involved

The majority (44 out of 54 who responded to this question) were recruited by their Regional Coordinator. Most of the other respondents stated they were recruited either by their Director of Occupational Education or by both the Regional Coordinator and Director.

The sample appeared to be a reasonable representation of ISSOE teachers. The sample was almost equally divided as to sex (29 females and 26 males). Teachers had spent an average of 10.9 years as a teacher (standard deviation = 7.53) and an average of 2.4 years with ISSOE (standard deviation = 0.98). Although they were not specifically asked what subject(s) they taught, 16 volunteered this information in response to the questionnaire item "Position in addition to teacher." The program areas represented included agriculture, auto

mechanics education, cosmetology, data processing, food trades, and health services. Finally, at least eight different regions, and many more occupational sites, were represented in the sample.

B. The ISSOE Manual specified the following duties for ISSOE teachers:

1. Selected program teachers attend summer workshop orientation and begin development of modular materials.
2. Work in cooperation with other program teachers during the following school year to review content outline and develop modules.
3. Work through craft committees, or other suitable regional business and industry groups, to validate ISSOE materials.
4. Introduce ISSOE modules into their courses and programs.
5. Review, critique, revise, add or delete materials and make recommendations to Clearinghouse during the second year of development.
6. Contribute to the student reporting system for program monitoring and creation of student employability profile.
7. Participation in selected research and development activities to improve management aspects of instruction.
8. Communicate special needs related to ISSOE activities to their Regional Coordinators.
9. Participate in evaluation studies and recommend improvements in the management of ISSOE.

C. Current role practices

The following items summarize the major activities and contributions of teachers. It should be emphasized that there was a great deal of variability in the data which is understandable given the variety of regions, programs, levels of experience and exposure to ISSOE. While the major emphasis is necessarily upon trends and average results, this variety should not be lost sight of.

Each item on current role practice is accompanied by an average rating which varies on a five-point scale of rated importance. On this scale, 1 = unimportant, 2 = slightly important, 3 = somewhat important, 4 = highly important, and 5 = absolutely essential. The other number accompanying the average rating is the standard deviation which provides an estimate of the variability among teachers' responses. These data are also summarized in Table 3.

Each role activity listed is also briefly discussed. The following, then, are the role activities identified:

1. Attendance at required orientation and training sessions (average rating = 3.6, standard deviation = 1.42). This item elicited a range of responses, suggesting that the perceived importance of required orientation and training sessions varies widely among teachers across the state. The average rating was moderately high. However, judging from the thirty-five teachers who listed their percent of time spent on this activity, it was one of the lower ranked activities. Thus, although it was rated moderately high in importance, it did not receive very large portions of the teachers' time.

Table 3

Data from Teachers concerning Importance of Current Role Practices

ROLE PRACTICE	AVERAGE RATING	STANDARD DEVIATION	TIME SPENT ON ACTIVITY RANKING
1. Attendance at required orientation and training session.	3.6	1.42	5
2. Introduction of ISSOE modules into instruction.	3.5	1.36	4
3. Assist in the development of curriculum materials.	4.2	0.94	1 (most)
4. Participate in additional SED assignments.	3.1	1.57	7 (least)
5. Assist in the validation of ISSOE materials.	4.0	1.12	6
6. Work with Regional Coordinators to communicate special needs.	4.0	1.61	3
7. Deal directly with students to assess instructional needs and program objectives.	4.0	1.60	2

Part of the reason for the variance in responses may be that different types of sessions are included under this category, and respondents had one type of session in mind rather than another. Various topics may be dealt with at these sessions, including: concepts of competency-based vocational education, overviews of ISSOE, introduction to ISSOE and VTECS materials, instructional resources, and curriculum development.

2. Introduction of ISSOE curriculum into instruction (average rating = 3.5, standard deviation = 1.36). Again, the average rated importance of this activity was moderately high, and the variance was also fairly high. The degree of emphasis placed on implementing ISSOE curriculum varies throughout the state as does the degree to which these activities are monitored and reported. In terms of time actually spent, this activity did not rate highly relative to the other activities according to the thirty-three responses to this item. This finding is consistent with the other evidence that ISSOE teachers in general spend most of the time they devote to ISSOE on curriculum-related activities.

3. Assist in the development of curriculum materials (average rating = 4.2, standard deviation = .94). This activity was given the highest average rating of importance combined with the lowest variability in responses compared to all activities. Also, more time was devoted to this activity than to any other. These findings are quite understandable since curriculum development is and has been a high priority for teachers involved in ISSOE. In fact, for many teachers curriculum development <u>is</u> their involvement with ISSOE.

4. Participate in additional SED assignments (average rating = 3.1, standard deviation = 1.57). This activity was given the lowest average rating in importance. Responses were fairly variable, however, indicating a certain degree of disagreement in the ratings. In terms of time required, less time was spent on this participation than on any other activity.

5. Assist in the validation of ISSOE materials (average rating = 4.0, standard deviation = 1.12). This activity received high average ratings in importance combined with lower variability than most of the other activities. In terms of time required, validation was one of the least time-consuming activities. The high rating of importance is consistent with the emphasis placed on local validation and verification, but validation does not yet demand a great amount of the teacher's time.

6. Work with Regional Coordinators to communicate special needs, receive information and instruction (average rating = 4.0, standard deviation = 1.61). Although this activity also received high average ratings, this average was computed from the most variable set of responses. The percent of time which teachers spent working with Regional Coordinators was third highest. This reflects a moderate degree of involvement with the individual who was, in most cases, responsible for recruiting the teacher into ISSOE and continues to be responsible for involving them in ISSOE activities.

7. Deal directly with students to assess instructional needs and program objectives (average rating = 4.0, standard deviation = 1.60). This activity received high average

ratings of importance combined with high variability in responses. The teachers also reported that they spent more time on this activity than on any other with the exception of curriculum development. It is possible, however, that this estimate is inflated due to a confusion between ISSOE time and the regular classroom time. It is obvious from other evidence (including item number four, introduction of ISSOE curriculum into instruction), that a rather small portion of a teacher's ISSOE time is spent in actual classroom applications. Yet many teachers spend a great deal of time assessing instructional needs and program objectives in the normal course of their duties as a teacher. Therefore, it is likely that many of the high estimates that pulled the average up for this activity were based on the teacher's classroom time.

Formal and informal linkages

This section represents an effort to clarify the actual linkages which the teachers share with others in the ISSOE system. For the most part, the information found below was abstracted from parts of the previous section dealing with role practices, and is presented here with a different emphasis.

Teachers are clearly the most isolated group in the system. Yet they are the most crucial group of participants in the sense that it is they who must deliver competency-based instruction to students.

A. Interaction with Regional Coordinators

Teachers work with Regional Coordinators to receive instructions and to convey any special needs, particularly in the area of curriculum development. Again, Regional Coordinators serve as

intermediaries between teachers and many other participants in ISSOE, particularly those in SED. As discussed above, teachers interact with Regional Coordinators with regard to many matters, including curriculum development and, to a lesser extent, classroom implementation.

B. Interactions with Team Leaders

Since not all regions have Team Leaders, this linkage does not apply in every region, and where it is found there are great differences in its importance. The Team Leaders are recruited from the ranks of teachers and administrators. Their interactions with teachers center around matters originally handled exclusively by Regional Coordinators such as coordinating curriculum development meetings, administering stipends, supervising teachers' work commitment, and disseminating information to participants.

C. Interaction with Area Facilitators

The extent of this linkage varies in importance from one area to another. The opportunity for interaction can occur at meetings or workshops where Regional Coordinators have asked Area Facilitators to attend and/or make presentations. Teachers' opportunities to interact with Area Facilitators in these settings appear to depend largely on requests for such interaction coming from the Regional Coordinator. Interaction can occur more frequently for those teachers who choose to earn college credits at the Area Facilitator's institution through their work with ISSOE. This opportunity for interaction appears to involve significant numbers of teachers in only one area.

D. Interaction with students

Teachers' interaction with students is, of course, the most important single linkage. It is there that competency-based instruction must occur, or not at all. Unfortunately, little is known directly about this linkage since teachers' involvement to date has dealt primarily with curriculum development rather than implementation. Also, little is known about student reactions and the extent of their satisfaction with ISSOE where they have been exposed to it. There are information gaps about this linkage that ISSOE Dissemination Phase III will address. The ISSOE Field Test will also provide more information about this linkage.

In summary, the major interactions between teachers and other participants in ISSOE occur on the local level and are limited to Regional Coordinators and Team Leaders. The crucial linkage with students is, for most teachers, outside of the scope of their involvement with ISSOE, which has dealt primarily with curriculum development. Another linkage that can be significant for some teachers in some contexts is that with Area Facilitators. Frequent interaction with Directors of Occupational Education is not counted as a linkage since teachers did not mention activities that included their Directors as part of their involvement in ISSOE. Other interactions apparently occur so infrequently for most teachers that they are not mentioned.

Problems and concerns

In the early interviewing stage, four main areas of problems and concerns were identified. These are simply categorical headings for organizing the diverse interview responses in a convenient, understandable manner. Brief comments of teachers were elicited under

each item on the questionnaire to indicate what concerns (if any) they had experienced that were similar to, or actually among, those listed. Upon examination of the teacher comments, it becomes clear that there is a certain amount of overlap between these categories. Thus, many responses under different category headings are closely related. These comments are synthesized and summarized under each topical heading, and finally, all material in this section is combined and summarized.

A. Applying ISSOE concepts

This item refers to problems related to individualization, class size, applications to particular fields and organizational constraints.

Forty-eight teachers responded to this item with a wide vareity of comments, most of which were positive. Problems and concerns dealt, for the most part, with the implementation of ISSOE rather than with philosophical differences. With a few exceptions, teachers appear to support strongly the major concepts of ISSOE.

The single concept most often mentioned was individualization. Several teachers were critical of the concept of individualization, giving as reasons the presence of special education students, preparation time, and large class sizes. Others, however, were more positive.

Other comments on ISSOE concepts included the following:

- modules must be broken down;
- too much paperwork; and
- hard at first to change routine.

B. Terminology

This item refers to problems of understanding terminology and applying terms correctly to a field.

Forty-one teachers who responded to this item gave a wide variety of responses. Seventeen stated that terminology presented no problems to them, while the remainder had a variety of concerns. Among the most typical responses were the following:

- difficulty or vagueness of the terminology (12 responses);
- difficult at first, but becomes more clear with familiarity (3 responses);
- confusing to students (2 responses); and
- need to standardize terminology across trades (1 response).

C. SED feedback

This item deals with problems related to feedback such as delays, negative feedback, and lack of inclusion of teacher-developed materials.

A majority of the forty-four teachers who responded to this item had some specific concerns regarding feedback from SED. Among the most typical concerns were the following:

- feedback too slow (29 responses);
- feedback received was incomplete or not what was expected (1 response);
- not enough opportunity to judge (5 responses); and
- lack of inclusion of teacher developed materials (1 response).

D. Teacher involvement

This item refers to obstacles to involvement such as teachers' hesitance, inappropriate or insufficient incentives, need to see a model working, logistical difficulties, and teacher competence.

Forty-seven teachers responded to this item with some problems or concerns. The most common responses were the following:

- hesitance of teachers--various reasons given for this (18 responses);
- need for increasing stipends (9 responses);
- need for more experienced teacher participants (3 responses); and
- need to see a working model (5 responses).

E. Comments

This item was reserved for comments not made under the previous items. A diverse collection of comments was elicited. In general, the flavor of these comments was positive. Although some specific shortcomings in the opinions of the respondents were mentioned, most appeared to perceive a continued growth and expressed optimistic expectations for the future of ISSOE. The following will suggest the variety of comments:

- More Team Leader training should have preceded this project.
- Schools need to update equipment used in industry to teach ISSOE competencies.
- This is my third year with ISSOE and I really see things happening--hope it continues.
- ISSOE has probably helped me personally more than any other program in focusing and directing my activities for student benefit.

TEAM LEADERS

Background

Team Leaders represent a new role category in ISSOE. This role was essentially an innovation on the regional level to help Regional Coordinators to deal with their responsibilities, specifically those that

involved direct interaction with teachers. This innovation has spread to a number of regions, but is still not found in every region. Regional Coordinators were polled on the validation questionnaire they received as to how many Team Leaders are operating in their region. They gave a range from zero to twenty-two.

Methods for Objectives 1, 2 and 3

The information for Team Leaders was obtained in a different way than for any of the previous roles. Since Team Leaders were not in widespread use during the pre-validation phase, the information about them was obtained primarily through contacts with Area Facilitators and Regional Coordinators.

Formal guidelines for the position, obtained from one of the Regional Coordinators, are presented below. Another Regional Coordinator arranged for an interview with a Team Leader during the pre-validation phase (Objectives 1 and 2). These sources provided a preliminary description of the roles and responsibilities of Team Leaders. Validation (Objective 3) was conducted in conjunction with the validation of the Regional Coordinator role. All Regional Coordinators were asked to provide a description of the roles (if any) of Team Leaders in their regions. This information is summarized below.

Findings for Objectives 1, 2 and 3

Background and roles

A. How recruited and involved

Some Team Leaders are recruited from among the ranks of ISSOE teachers and some from the ranks of administrators. Many Team Leaders have experience in ISSOE before they are recruited as Team Leaders. One Regional Coordinator recruited his Team Leaders from among his most experienced teachers. This was intended to give these teachers more incentive to be involved in ISSOE. Another Regional Coordinator recruited principals to

be Team Leaders in order to assure that they would have some administrative experience. Others have recruited both administrators and teachers with the latter serving primarily as curriculum committee chairpersons rather than having other administrative responsibilities.

B. Intended role practice

As a new role category, the Team Leader has not been stated as formally, nor clarified by experience as extensively, as the roles discussed earlier. Attempts have been made to develop formal guidelines with input being provided by SED, Area Facilitators, Regional Coordinators, and teachers. These guidelines have been revised and adapted to fit local conditions and administrative styles. The following list of Team Leader responsibilities represents an adaptation to a region in which Team Leaders have a significant role.

1. Confirm commitment/participation of curriculum committee members.
2. Develop a roster of curriculum committee members to include full name, home address, telephone number, school address, school phone and social security number.
3. Assist the teachers in writing major objectives, enabling objectives, instructional strategies and CRMS.
4. Prepare a calendar to include time, date and location.
5. Establish a process/management plan to review, critique and revise ISSOE/VTECS curriculum per the State Education Department's assignment procedures.
6. Maintain records of teacher attendance, and work completed.
7. Feedback, clearinghouse recommendations to teachers.
8. Submit all materials through the Regional Coordinator.
9. Assist the Regional Coordinator in the coordination of budget expenditures and inservice needs.
10. Maintain positive public relations with Center administration.
11. Identify future curriculum areas of development in the Region.
12. Implement student reporting system.
13. Implement and monitor validation/verification process.

C. Current role practices

Four Regional Coordinators who use Team Leaders provided information on the activities for which Team Leaders are responsible. The following list is a summary of these data. The number of Regional Coordinators (out of four) who listed the activity is indicated beside each item:

1. Assist in teacher recruitment and/or orientation (3).
2. Disseminate information (2).
3. Schedule meetings with subject teachers (2).
4. Resource for ISSOE teacher (3).
5. Liaison to administration (1).
6. Review and critique ISSOE and VTECS materials (1).
7. Supervise completion of assignments (2).
8. Attend team leader workshops (1).
9. Primary contact person (1).
10. Report back to ISSOE Coordinator (1).

Formal and informal linkages

The linkages listed below are those abstracted directly from the available evidence regarding Team Leader activities. The emphasis is placed on the linkages that appear to be most well-defined and clearly supported in the regions that have Team Leaders. Other linkages that are outside of the role of Team Leader (e.g., the teacher Team Leader's contact with students) are excluded.

A. Liaison between Regional Coordinator and ISSOE teacher

This linkage has two components: interaction with the Regional Coordinator and interaction with the teacher. This appears to be the most important linkage in terms of both the intended role and the actual role practices. The linkage does not replace teacher interaction with the Regional Coordinator who continues to be heavily involved with teachers. Rather, it helps assure local contact between teachers and Regional Coordinators through the Team Leader.

B. Liaison between Regional Coordinator and Directors of Occupational Education.

This linkage also has two components: interaction with the Regional Coordinator and interaction with Directors. The linkage is similar to that between Regional Coordinators and Directors in the same way that the previous linkage is similar to that between Regional Coordinators and teachers. Team Leaders can serve to represent ISSOE locally, to deal with administrator concerns and to take care of routine matters such as arranging schedules, etc., which require administrator support and approval. In some cases, of course, Team Leaders themselves are administrators, thus making this linkage stronger.

Problems and concerns

Information was not obtained directly from Team Leaders on their problems and concerns. It is not difficult to surmise that their problems overlap with those of Regional Coordinators even though this point cannot be documented here. The two roles are similar in purpose. Team Leaders are more closely aligned with teacher and/or local administrator concerns and less closely aligned with the specific management concerns of Regional Coordinators.

The sample of teachers discussed earlier contained a number of Team Leaders. The few respondents who stated their position as Team Leaders were indistinguishable from other teachers in their responses on the teacher validation questionnaire. They did appear to have concerns typical of teachers in general. It is reasonable to expect the same would be true of administrator Team Leaders.

A concern specifically related to the Team Leader role probably has to do with clarification of their present role since it is relatively a new role.

General management and evaluation issues

The focus of this investigation was not specifically upon the management and evaluation issues which Team Leaders encounter. However, Team Leaders are continuously involved with management and evaluation issues. Since the evidence for this role-category was indirect, specific examples of comments related to management and evaluation will not be made. The following are possible management and evaluation issues relevant to the Team Leader role. These were abstracted from the list of responsibilities that Regional Coordinators provided.

- What incentives can be used to recruit teachers?
- What are the obstacles to regularly schedule meetings and how can they be overcome?
- What information do teachers need to complete their assignments?
- What information do administrators need regarding their involvement in ISSOE?
- What criteria do teachers use to review ISSOE materials?

NEW YORK STATE EDUCATION DEPARTMENT/
RESEARCH COORDINATING UNIT

Introduction

This section will present methods and findings regarding the roles and responsibilities in ISSOE of both the State Education Department (SED) and the Research Coordinating Unit (RCU). Both of these complex components are organizationally interrelated and accordingly may be considered in the same section. Similarly, there is continuous interaction between the long range planning, management and evaluation of ISSOE, on the one hand, and research and development activities, on the other hand.

In the context of this report, SED is used as a shorthand for "Division of Occupational Education Instruction, SED." This division includes: the Chief and his associates who together comprise the ISSOE Coordinating Unit; The Bureau of Occupational Education Curriculum Development; and the instructional bureaus (e.g., Agricultural Education, Home Economics Education, Business Education, Industrial Arts Education, Distributive Education, Health Occupations Education, and Trade and Technical Education).

The RCU includes: the Bureau of Occupational Education Research which is part of the Division of Occupational Education Research, Planning, and Education, SED: the Cornell Institute for Occupational Education (CIOE), and the Institute for Research and Development in Occupational Education, City University of New York (IRDOE). The RCU's role in ISSOE is concerned with the conduct of research and related developmental activities.

Methods and Findings for SED

Most consultations between CIOE and SED during the period of this study addressed the conduct of research and development activities on ISSOE. They did not directly address the roles, responsibilities and concerns of SED officials as participants in ISSOE, as defined by Phase II research. This was deferred in order to coordinate with SED's total agenda for ISSOE-related activities. One of these activities was a workshop conducted on November 19, 1979 for SED staff on roles and responsibilities in ISSOE. Given that participants were heavily involved with planning and codifying role-definitions, it was thought best to defer further inquiry until a later date so that data might more accurately reflect actual practices. This strategy received full endorsement from SED.

Since the method of direct interviewing followed by validation, as was used with other roles, was not followed, other methods and sources were used. One source was, of course, the ongoing consultation between SED and CIOE regarding ISSOE or other related research and development activities. Another source of information was provided by other participants in the study. Information on SED, implicit in the earlier sections of this report, provides a useful basis for cross-validating the other sources of information. A third source, the workshop, mentioned above, dealt with defining and formulating roles and responsibilities of SED personnel in ISSOE.

In view of the rethinking and reformulating of roles and responsibilities of SED that is now taking place, this section of the report will focus on formal role statements and possible future role activities of SED. The above sources, the SED workshop in particular, will be used for that purpose. This strategy was recommended and supported by SED.

ISSOE Coordinating Unit

Included below is a formal list of roles and responsibilities of the ISSOE Coordinating Unit (from a presentation by Kenneth DeCerce, SED in Albany, November 19, 1979):

1. Coordinate overall activities of ISSOE.
2. Coordinate the design, and development of Competency-Based Occupational Education in New York State.
3. Coordinate research activities on Competency-Based Vocational Education.
4. Develop procedures for distribution of Competency-Based Vocational Education.
5. Review and evaluate ISSOE proposals for regional funding.
6. Prepare and budget for statewide regional, and area wide activities.

7. Provide liaison between ISSOE Regional Coordinators and Division of Occupational Education Instruction.
8. Provide for means of inservice to teachers developing Competency-Based Vocational Education materials.
9. Report development within ISSOE to the Instructional Bureaus.
10. Identify ways in which Bureau staff and other units participate in the development of ISSOE.
11. Monitor regional progress in each program developed by ISSOE.
12. Cooperate with Instructional Bureaus in monitoring the development of materials in each program area.

In addition to this formal statement of roles, the ISSOE Coordinating Unit has continuously defined its role in terms of its responses to Regional Coordinators' requests for assistance. A catalog of these requests, together with responses from the ISSOE Coordinating Unit, was assembled by the latter to provide some insight into their roles. This information is summarized below.

The major role activities of the ISSOE Coordinating Unit in response to requests from the field can be broken down into three types of activities:

1. development;
2. validation; and
3. implementation.

1. Development Activities

- Identify and encourage key people to become involved in ISSOE.
- Provide Coordinators with a list of SED personnel and phone numbers.
- Provide list of job titles relating to each subject area.
- Inform Coordinators of all new policies and available materials.
- Promote ISSOE through regular SED activities.
- Have SED representatives present at area planning sessions.
- Provide information on scheduled visits of Bureau staff to regions.
- Take part in statewide meetings and provide inputs.

2. Validation

- Assist in developing a consultant committee for ISSOE validation.
- Request SED Bureau staff to be present at advisory group meetings.

3. Implementation

- Present model of open entry/open exit programs at Coordinator's meeting.
- Present various models for implementation of ISSOE.
- Make available VEA criteria for subject areas for implementation of CBVE.

It should be emphasized that the above activities deal with responses to specific requests for assistance from the field. The list is therefore not a comprehensive list of all activities of the ISSOE Coordinating Unit in regard to ISSOE. Information on these activities was available indirectly from the sources mentioned above, (e.g., other participants in this study and involvement with CIOE). Many of these activities listed in the formal guidelines were confirmed by these sources of information.

The following list is merely to suggest the scope of these activities: and recapitulate some of the major contributions:

- monitor research and development activities related to ISSOE
- monitor progress in each program area
- coordinate overall activities of ISSOE
- review annual ISSOE proposals

In summary, the ISSOE Coordinating Unit assumes the major responsibilities for coordinating the entire ISSOE Project in all its phases. At the same time, it has been guided by the philosophy that ISSOE should develop broad-based support at the local level and should represent local input at all points. Thus, it has attempted to provide leadership and guidance rather than mandates or rigid guidelines.

Bureau of Occupational Education Curriculum Development

The Bureau of Occupational Education Curriculum (BOECD) is an SED bureau which produces vocational education teachers' guides, charts, and other curriculum aids. This bureau also advises local districts and institutions in producing their own instructional materials.

Since the early phase of ISSOE has dealt primarily with curriculum development and validation, BOECD has played an important role in ISSOE. Consistent with the philosophy that has guided ISSOE's development, that curriculum materials should be developed and validated locally, BOECD's role has dealt more with critique, integration and assembling of input from the field into ISSOE catalogs, rather than with its more traditional function of producing these materials. (The integration of regional input for adapting VTECS materials into ISSOE is a parallel function now performed by Area Facilitators.)

The volume of material processed by the Bureau is one contributing factor in the delays reported by many participants in the field in the receipt of catalogs. Printing delays are another factor.

In addition to this major function in ISSOE, the Bureau Chief and staff collaborate, as necessary, with other SED personnel on ISSOE-related activities such as providing input at statewide ISSOE meetings and planning sessions.

Instructional Bureaus

The instructional bureaus of the Division of Occupational Education Instruction (e.g., Agricultural Education, Business Education, Distributive Education, and Trade and Technical Education) contributed to the formulation of potential roles in the SED staff meeting/workshop held in Albany on November 19, 1979. At that meeting, Bureau staff generated possible role activities in regard to development, student reporting, validation, and implementation.

These suggestions were generated in small group sessions dealing with each one of these topics. They were then discussed, critiqued and recorded. A summary of suggested roles and responsibilities was prepared (see Appendix C) and was made available for use in this project. A few of these activities are presented below to suggest the variety of these suggestions. They are grouped into the categories of development, student reporting, validation and implementation.

Development

- Assure local advisory committees/employers' input
- Assist in development of criterion-referenced measures
- Respond to requests of Regional Coordinators
- Work in direct contact with Team Leaders

Student Reporting

- Direct people toward information on careers
- Identify specific evaluation techniques to use with tasks
- Assist school personnel in techniques of preparing IEPs

Implementation

- Help teachers use ISSOE materials
- Identify and promote visits to model programs
- Conduct inservice seminars to disseminate information on ISSOE

A number of activities from the complete list of suggested roles and responsibilities were closely correlated with the ISSOE Coordinating Unit's listed activities conducted in response to Regional Coordinators' requests for assistance. For example, Bureau staff:

- provide ongoing guidance and clarification to field;
- identify how to promote ISSOE in the field;
- respond to requests from Regional Coordinators;
- identify employers who could assist in validation process; and
- help teachers use ISSOE materials.

Again, the above are suggested roles and responsibilities which are not necessarily being done now but which were believed to be possible significant areas for future contributions.

RCU: BOER/IRDOE/CIOE

The Research Coordinating Unit (RCU) is designated in the Vocational Education Act for the conduct of research and development in occupational education research. In New York State, the RCU is composed of three components: the Bureau of Educational Research (BOER) which is part of the Division of Occupational Education Planning, Research and Evaluation, SED; Cornell Institute for Occupational Education (CIOE); and the Institute for Research and Development in Occupational Education, City University of New York (IRDOE).

BOER is the component of the RCU located in Albany, New York. It stimulates, coordinates and disseminates vocational education facts and figures both intrastate and interstate, and conducts a number of research projects supported by VEA funding, broadly related to the improvement of occupational education programs in New York State. Of the three components of the RCU, it has been least directly involved in the actual conduct of ISSOE-related research. It has been involved indirectly, however, in providing input for setting priorities for VEA funding, and articulating other BOER research activities with ISSOE-related projects. BOER has also played a role in providing feedback on ISSOE-related preliminary project reports, providing informal guidance on articulation with other projects, helping to coordinate the termination and beginning of projects according to contracted work schedules, and the like.

IRDOE is the research group at the City University of New York which has also been involved in ISSOE-related research projects. However, their current direct involvement in ISSOE research and development activities has been somewhat limited. They have been indirectly involved through providing inputs for setting priorities for VEA funding, providing advice and feedback on the development of ISSOE, and the like.

CIOE was created in 1971 at the request of the New York State Education Department, to strengthen and enhance occupational education in the State of New York. Of the three components of the RCU, CIOE has been most directly involved in conducting research and development activities related to ISSOE ever since its inception. The projects which have been either completed or are in progress are the following:

- Instructional Support System for Occupational Education
- ISSOE Field Test-Prototype Student Reporting System for ISSOE
- ISSOE Student Guidance and Development of Personalized Occupational Education Programs
- ISSOE Dissemination Planning - Phase I
- ISSOE Dissemination Planning - Phase II
- Managing Student Learning: ISSOE Student Planning and Reporting System Phase I Field Test
- ISSOE Instructional Planning

In addition to activities related to the above practices, CIOE has engaged in a number of other activities which, directly or indirectly, have implications for ISSOE.

First, in an attempt to develop a programmatic attack on occupationally relevant research and development, including ISSOE projects, CIOE has attempted to articulate its ISSOE-related research with other ongoing research activities. A partial listing of these other related research topics is presented below:

- basic skills in occupational education
- affective and social outcomes of occupational education
- sex-stereotyping in occupational education programs
- economic returns on occupational education
- continuing education needs assessment

Through sharing project staff with these other research projects, a more programmatic approach has emerged which should benefit ISSOE research in the future.

In addition, projects dealing strictly with ISSOE are now more closely articulated through the addition of an ISSOE Area Coordinator at CIOE.

Second, CIOE has initiated and helped coordinate occasional meetings with key SED personnel, Area Facilitators, and others who work directly on ISSOE. The purpose of these meetings has not been to discuss policy, but rather to work on current research and development issues, provide information on these activities, and to articulate them with other ISSOE activities.

Third, CIOE has been involved as a resource for ISSOE dissemination activities. These have included numerous workshops, regional and state meetings at which CIOE has been requested to present and illustrate components of ISSOE. These requests have typically come at the request of SED, Area Facilitators or Regional Coordinators. When appropriate, CIOE staff also make presentations related to ISSOE at state or national meetings of professional associations.

OTHER ROLES

Students

Students are the critical participants in ISSOE, or in any instructional program. Ultimately, if students' needs are not served effectively by ISSOE, how the rest of the support system functions does not matter.

Over 40,000 students had been exposed to ISSOE as of 1980. However, little is known about the perceptions of students who have been involved in ISSOE, their degree of satisfaction with competency-based instruction, the problems and concerns they have experienced, etc. This is a serious omission in a student-centered approach to learning. ISSOE Dissemination, Phase III will directly address these issues.

Management and evaluation issues also concern students. As ISSOE attempts to move toward a design for comprehensive management and evaluation, the student's questions and concerns should not be lost from view. Some of these questions, for example, are the following:

- Can the student easily tell where he or she stands with regard to competency attainment?
- Does the student understand the relationship between competencies and real-life job opportunities?
- Does the student receive adequate help in program planning?
- Does the student receive adequate help when he or she has difficulties?
- Does the student's training in secondary school vocational training articulate with postsecondary opportunities?

Many more questions like these could be generated. Despite the variety of students, the identification of general problems and concerns such as the above, through ISSOE Dissemination, Phase III, is a reasonable task. It could well have broad implications for the management and evaluation of ISSOE.

Parents

Parents have a large stake in the quality of their children's occupational education program. Thus, any well-publicized educational innovation is likely to draw the attention of the interested parent and, under certain circumstances, elicit their action. Although parents do not interact with ISSOE participants regularly or on a large scale, they can have a significant impact on occupational education programs. This influence can come either directly, to affect their children's enrollments, or indirectly, through participation in political processes that affect occupational education programs. One parent's influence is not great, but the combined influence of many parents over a period of time can, indeed, be great.

Because many parents do not interact frequently with ISSOE participants, they are largely unaware of the advantages of ISSOE. Their concerns are not strongly influenced by the "proximal stakeholders," i.e., those close to the program who have an interest in its acceptance, such as teachers, administrators, etc. Their concerns, in the absense of persuasive contrary evidence, are shaped largely by "distal" stakeholders, such as newspaper columnists, commentators, etc., who are far removed from the local settings but enjoy widespread credibility as consumer protectors. Depending on the political climate, fiscal constraints, and numerous other factors, these concerns will vary markedly.

The current economic situation, with high inflation, cutbacks for public services in the wake of actions similar to California's Proposition 13, and heightened consumer awareness, are contributing factors to the skepticism or indifference with which parents often greet new innovations. Two concerns along this line might be:

- How much will the program cost?
- Will it make a difference in my son/daughter's ability to find and hold a job?

Recently, some "distal" stakeholders (e.g., columnist William Raspberry, 1979) have contributed to public skepticism about occupational programs by calling into question whether they really increase employability. This is a point where wider publicity about the effects of ISSOE, particularly its benefits for students, could make a significant contribution.

Local Advisory Committees

The concept of an advisory committee to vocational programs arose as part of the Vocational Education Amendments in 1968. An advisory committee is a group of individuals selected because of their knowledge and expertise in certain areas to advise educators regarding vocational programs. The membership of the committee usually reflects a labor-management balance. Such committees can operate at the federal, state and local levels. Their main purpose is to be helpful in providing, maintaining, and improving vocational education programs. The committee provides advice and assistance, not mandates. Their specific role is usually defined by the vocational administrator with whom they work. A few ways in which committees can be helpful are: (A) participation in bond issues or special tax levies; (B) participation in plan development; and (C) providing advice on a wide range of administrative practices including budgeting, accounting and school financing. Another function that is relevant for ISSOE is advising the school administration on the types of offerings required to satisfy community needs for occupational preparation as well as retraining.

The rationale for advisory committees is clear. Since vocational programs prepare youth to enter the labor market and help upgrade the skills of adults, these programs must be closely evaluated on a continuing basis by persons engaged in various occupational fields in which instruction is offered. This close cooperation with the local business and industry community provides a method for conducting this evaluation (Barlow, 1974).

The majority of states, including New York, either stipulate or recommend that Local Advisory Committees be formed. In New York State there are Local Advisory Committees in the five largest cities, the forty-four BOCES, some smaller districts, and in two-year colleges. Despite this fact, Directors of Occupational Education surveyed in this study rated their activities with Local Advisory Committees as the least important activity among those listed (see page 61 of this report). Apparently Local Advisory Committees have not been set up at all occupational education sites, and/or they are not all functioning as effectively as could be wished.

Central New York Regional Computer Services Center

The Central New York Regional Computer Services Center located at the Onondaga-Madison BOCES is one of six computer service facilities located throughout New York State which have been designated as the facilities responsible for making the Occupational Education Reporting System (OERS) operational in their part of the state. The OERS system is basically a computer system which collects and stores individual occupational education student information. When fully operational, OERS will provide basic information regarding student enrollments and student characteristics that will be useful for the overall planning of occupational education in New York State.

A priority in the development of support materials for ISSOE has been to assure that the methods for obtaining and recording data regarding student plans and student progress should be compatible with OERS. This has been a priority in order to assure that the monitoring of student progress, and other information obtained locally from students in ISSOE, will contribute to the management of the total ISSOE system. For these reasons, pilot-testing of materials under development in ISSOE has been done previously at sites where the Onondaga-Madison OERS computer facility had already developed the capacity to process student data.

More recently, the ISSOE Field Test had as one of its objectives to "coordinate activities with Onondaga-Madison BOCES to assure compatibility of the Student Planning and Reporting System with the OERS data processing capability." In addition to developing the capability required to make the OERS system operational in Regions 6, 7, 9 and 10, therefore, the Onondaga-Madison BOCES facility has a direct role in ISSOE. This role involves facilitating the progress of research and development of ISSOE forms, to be used in planning and monitoring, to assure that they are compatible with OERS.

Summary of Other Roles

In summary, this last category of participants in ISSOE has included several important roles which were not covered in any of the previous categories. The importance of the student and parent roles needs no documentation. The discussion of these roles served as a beginning conceptualization of these roles and the problems and concerns associated with each one. The other two roles discussed in this section were Local Advisory Committees and the Central New York Regional Computer Services Center. Both have an important potential role in the overall planning and periodic updating of ISSOE programs.

Methods and Findings for Objective 4: Cost Estimation

INTRODUCTION

Objective

The fourth objective was to provide methods of cost estimation that are useful for occupational education administratros to consider in deciding their possible involvement in ISSOE. Therefore, this section discusses methods and general considerations for occupational education administrators to use in making cost estimations. The general criteria that this information should meet include: (A) the information focuses

on meeting the needs of Directors of Occupational Education; and (B) the information is comprehensivle without a technical background in economics.

Needs

Occupational Education Directors have a variety of needs regarding the issues of cost of ISSOE programs. Some Directors, relatively uninformed about ISSOE, may need general information on costing considerations that will "sell" them on ISSOE. They would be most persuaded by information that has a direct bearing on their decision between supporting ISSOE programs or another alternative. Others, perhaps already involved with ISSOE, may want arguments supporting ISSOE that they can use with others. A third category of Directors may need information, not primarily to persuade themselves or others to support ISSOE, but rather to answer their questions about how funds might best be allocated to make their involvement in ISSOE more effective in the long run. This report will concentrate on the first two kinds of needs. However, those who merely wish to make their allocation of funds for ISSOE more effective may also find useful suggestions in this section.

Scope

Several qualifications as to the scope of this presentation are appropriate. First, a conceptual approach will be taken in preference to an analysis of actual costs and benefits incurred by local sites adopting ISSOE. The latter type of analysis is assumed to be premature at this stage of development of the ISSOE system, as will be made clear as the argument unfolds. The suggestions and general considerations that follow will aid local administrators in performing their own detailed analysis appropriate to their site. The second qualification is that the general guidance provided will not assume a specific "correct" form that ISSOE utilization should take. For purposes of illustration, it will be convenient to describe some typical or idealized features of ISSOE programs, but this description is intended to be illustrative rather than normative for any specific program; but the points made should apply to many possible configurations of ISSOE utilization.

Thirdly, the presentation focuses mostly on cost considerations, although it is evident that benefits must also be considered. This restriction in the scope stems from the belief that many misconceptions exist about estimating porgram costs, and these misconceptions can interfere with sound decision making. Therefore, the stress will be placed on cost considerations. However, the key role of potential benefits of ISSOE will be addressed for the special case where costs associated with ISSOE appear to be be greater than those of some alternative.

Finally, the discussion focuses on the future rather than the past or the present. This orientation toward the future is a direct consequence of the need for this information to be useful for decision making. By definition, decisions are future-oriented. Decisions may use past and present data, but they are primarily concerned with estimating future states of affairs from available sources of data.

GENERAL CONSIDERATIONS FOR A CONCEPTUAL APPROACH

The Concept of Cost Analysis

Rationale. A general conceptual approach to cost estimation makes sense in light of the many different estimates that can be made of how much a program costs. On the one hand, there is a tendency to conceptualize costing information as "hard data," or objective information not open to much debate. On the other hand, wide variations in cost estimates are quite commonplace. One reason is that "cost" is frequently defined in ways that do not particularly facilitate making decision between program options. For example, costs are not simply advantages of doing something relative to the disadvantages, e.g., the positive benefits of ISSOE for teachers and students relative to any possible shortcomings. The problem with this conception of cost is that it provides no criterion for choice. Since choices always concern alternative future states of affairs, a useful conception of cost must direct our attention to comparison among those alternatives.

According to Haller (1974), Cornell Professor of Educational Administration and noted author on educational cost analysis, the most useful conception of cost for program decision making is that of "opportunity cost." That is to say, whenever the choice is made for involvement in one program rather than for another, the cost associated with that choice is the highest valued opportunity forsaken by not choosing another alternative. In a world of scarce resources, every meaningful choice is one in which resources are allocated in one way rather than in another. The choice to allocate resources for ISSOE is no exception. The most meaningful conception of the cost of involvement in ISSOE is the value, to the individual affected, of alternative uses for resources required by ISSOE programs.

A distinction should be made between a cost-effectiveness analysis and a cost-benefit analysis. The former asks which of these alternatives can do the job best for some given amount of money, or a given job for the least amount of money. The latter asks what are the benefits of the various alternatives and how much does it cost to get them.

A cost-effectiveness analysis can be carried out when the decision maker has a reasonably clear idea of what he or she wants and has a means of determining the costs associated with alternative ways in which to achieve the desired results. In such a case, a program director might be soliciting "bids" on an occupational program which must meet certain minimum requriements both in content and cost. The decision maker may suspect that he or she needs an occupational program, yet not know what kind or what can be expected. In this case, programs are solicited rather than bids. The representatives of the competing programs might then present the costs and benefits associated with their alternative, or some other procedure may be used to determine these costs and benefits.

According to Goldman (1967), a cost-benefit analysis requires that there be a way to translate costs and benefits into monetary values. Beyond this distinction, the two types of analysis are quite similar. Cost-effectiveness is the preferred term whenever it is difficult to express benefits in monetary terms.

Thomas (1971) suggests five steps to be included in a cost-effectiveness analysis:

1. Define the program objectives;
2. Identify relevant alternatives;
3. Estimate costs of alternatives;
4. Develop a model to assess cost-effectiveness; and
5. Apply a decision-rule.

The above steps follow a logical sequence. First, objectives are necessary to provide the ultimate basis on which to judge effectiveness. Second, alternatives which purport to achieve those objectives must be identified. Third, the crucial step of estimating costs of alternatives is full of pitfalls that need to be well-understood; that is why this section of the final report addresses these pitfalls. Fourth, a model provides a basis for assessment of the degree to which each alternative will achieve the objectives. Finally, procedures or criteria are necessary as a basis for choosing among alternatives.

Summary. The concern of a decision maker in undertaking a cost analysis is with the effectiveness of various alternatives for achievement of his or her program's objectives or goals. A clear and logical sequence of steps well-thought out in advance, that relates costs to objectives, will aid decision making. The most difficult part of this sequence is utilizing a meaningful concept of costs.

To review Haller's (1974) definition of cost, educational program evaluation for decision making requires a concept of "opportunity costs." "Costs are benefits lost," Haller states. The cost of any particular decision, then, is the forgone benefits which would be derived from the use of an alternative. The meaning of cost, therefore, "depends upon the alternatives involved" (Haller, 1974). A major task then, is to "accurately sort two or more alternative futures so that the decision maker can choose among them" (Haller, 1974).

THE ALTERNATIVES

But what are the alternative futures for an administrator considering ISSOE?

The comparison among alternatives, posed by ISSOE, requires first that we have some basis for describing what involvement with ISSOE means to an individual site. The decision maker must have in mind what the general features of ISSOE are, and also what are the likely alternatives that ISSOE will replace. As we said before, these characterizations must be general enough to apply to the variety of sites. The task of a decision maker will be to supplement these general considerations with more specific comparisons of what ISSOE involvement will mean, and what it will replace, in any given site.

The general features of ISSOE relevant to cost estimation may be discussed under two headings:

- a general comparison between competency-based vocational education (CBVE) and the traditional counterpart;
- a general characterization of the present and projected future development of CBVE (represented by ISSOE) in New York State.

The first topic is discussed comprehensively in several publications now available to the potential user. However, it will be useful to summarize some of the most salient features. The second topic must be briefly discussed even though deviations from the general characterization should be taken into account by the decision maker.

CBVE Versus a Traditional Approach

The general comparison between competency-based system of instruction and a traditional one involves defining what is implied by the term competency-based. Other important terms to discuss include modularized and individualized education.

Competency-based instruction. Competency-based instruction aids occupational teachers in the identification and teaching of the competencies required for entry into a variety of occupations. Validity is assured bu involving employers in the selection and identification of competencies, or specific task-related behaviors, and levels of proficiency. Use of performance terms aids instruction by providing specific information to students about the target behaviors which they need to demonstrate. The fact that these behaviors are actual employer-selected skills required for entry level is a motivating factor to students. They can obtain definite feedback on whether they are acquiring the competencies they need for achieving their specific goals. This system helps take the guesswork out of learning from the standpoint of the student since he/she can readily understand what will be required.

It can be argued that in competency-based instruction, as contrasted with traditional instruction, evaluation can change failure-prone students into productive ones. When students are evaluated by comparison to other students on sometimes vague and irrelevant criteria, the attitudes, as well as performance, of students can deteriorate. When evaluated in terms of their own performance on specific, meaningful criteria, however, a dramatic reversal can occur. This latter method of evaluation, termed criterion-referenced measurement, goes hand-in-hand with the assumption that all students can achieve proficiency at an acceptable level.

From the standpoint of the instructor, using competency-based instruction with employer-validated criteria means that the course's content will be timely, relevant and probably well-organized. Communication of requirements to students and individualization of both learning and evaluation are all facilitated by working from sets of target objectives. Less effort is necessary to justify instructional decisions to students, parents or administrators when those decisions are carefully tied to objectives on which all agree.

Modularized Systems. Another relevant term often lined with CBVE is modularized. In theory, a modularized system (such as ISSOE) is one in which large curriculum blocks have been broken down into manageable clusters of competencies, or modules. Each module contains tasks, objectives,

suggested instructional content and criterion-referenced measurements. These modules can then be recombined in various ways to form units and courses. Both flexibility and organization are thus achieved. Also, it becomes easier to chart the employability of a student in terms of competencies successfully demonstrated rather than larger curriculum blocks of more vaguely defined content.

Individualized education. Individualized education (I-E) is a concept that is closely related to CBVE, and hence to the conceptual basis of ISSOE. The concept of I-E involves the development of goals, objectives, strategies, and instruction, together with provisions for evaluation and feedback, in order to cater exclusively to the needs and interests of the individual pupil. A related term, individualized instruction (I-I), refers to transmission of information to the pupil in ways that respect the pupils' unique characteristics and needs. The concept of individualization allows not only different goals for different students, but also different methods and materials for reaching each goal. There is no "standard" or "average" child for comparison when one wishes to individualize. Each pupil is considered a unique person with unique learning styles, and instructional procedures must meet those needs.

The advantages of individualized programs are well-documented (Ullmer, 1973). A few of these advantages are, for example:

- Teachers and students become uniformly aware of the objectives of a course
- Much of the work of instruction is carried out by instructional support systems (such as ISSOE)
- The student schedules much of his or her own learning, and can move at his or her own pace, repeating or skipping instructional segments as appropriate
- The instructor has more time to devote to developing instructional techniques aimed at higher-level competencies
- The student is not in a race for grades with classmates.

From the above, it is obvious that the concept of I-E is a significant aspect of CBVE. The traditional alternative to I-E involves the neglect of the goals of individual students in favor of implementing standardized goals, objectives and instructional strategies. Traditional instructional planning appears to be based on an elusive "standard" or "average" student.

When making a comparison between the costs of traditional educational practices and I-E, the opportunity costs of either one are the opportunities or advantages that must be forsaken by making the choice. The decision maker may be familiar with arguments against CBVE that hinge upon presumed "advantages" of a traditional approach that are forsaken in choosing CBVE. These arguments will be closely examined below. A key point in this discussion will be that these "advantages" are more apparent than real. But more importantly, the decision maker's attention will be directed to the far more persuasive advantages of CBVE (c.f., the previous paragraphs). Since all these benefits (and more) are forsaken in choosing a traditional program, the costs of the traditional program as opposed to a competency-based alternative are great indeed. These points will be supported in detail in the discussion that follows.

Development of the ISSOE System

The above comparison dealt with conceptual differences between CBVE and the traditional counterpart that are relevant to decision makers. However, these must be supplemented by a characterization of the particular form of CBVE that ISSOE represents in New York State, as well as the institutionalized form it is likely to take in the future. Despite variations across the state, this Phase II report provides a basis for such a general characterization. The points listed below are by no means comprehensive. They are, however, among the most relevant characteristics for a cost comparison.

In brief, the ISSOE system may be characterized as a project that:

- is in a "start-up" phase in comparison with anticipated developments over the next few years.
- enjoys priority status on SED's agenda for support under the administration of VEA funds, as it moves toward institutionalization.
- is devoted, in large part, to curriculum development on the local level, with SED support for the large initial investment in this phase.
- will move more vigorously toward full-scale implementation, first, in a few selected sites, then in more sites across the state.
- is guided by a philosophy that any curriculum should be validated locally to ensure that graduates are trained to enter the local job market.
- is not yet the focus of public debate, but will become more vulnerable to public scrutiny as it gains in visibility.

The above discussion of the nature of the innovation that poses alternatives for the decision maker goes from the general (CBVE) to the concrete and specific (ISSOE's development). The decision maker must make the analysis even more specific to answer the question, "What can (or does) ISSOE implementation at my site involve, and what is it likely to involve here in the future?" But being concerned about specifics should not mean losing sight of the well-documented possibilities that a broader perspective affords. Decisions must be informed by the possible alternatives that CBVE (represented by ISSOE's possibilities) makes available.

COST ESTIMATION METHODS

Professor Haller (1974) recommends several possible methods the decision maker can use to estimate the costs of a new program. These methods do not necessarily rely on evaluating alternatives in terms of dollars; indeed, some of the most important considerations for a cost-effectiveness analysis cannot be measured in dollars. For example, student time is an important variable to consider in regard to CBVE versus

traditional programs, but student time cannot be measured in dollars since no definite market value can be assigned to it. Thus, a different unit may be used in a cost analysis to facilitate comparisons among alternatives.

Haller recommends developing a list of resources necessary to run a program and describing alternative uses for those resources to be given up for the program. This requires that time be spent clarifying the decision that is to be made. All of the reasonable alternatives should be as well understood as possible, and all of the important circumstances that could affect the decision should be clarified. Haller recommends that the various alternative course of action should be laid out so the decision maker can assess each in the light of his or her objectives, and in terms of the benefits he will forgo by choosing one alternative rather than another. All of the activities required to begin and sustain a program, to meet program objectives, need to be described. These steps, then, are the starting point.

Input Structure

Remembering that future alternatives are being considered, budgets are of limited usefulness since they do not project costs far enough into the future (beyond the next fiscal year) to aid in decision making. Equally important, budget categories are too limited in that they do not consider all the costs (e.g., non-monetary costs) that a decision maker needs to consider. Finally, a budget structure is not flexible enough to deal with the unavoidable uncertainty of future costs. Haller recommends developing an "input structure," which is a method of analysis of the various resources that might be part of a program. The basic types of resources are:

- time
- space
- equipment
- supplies

It is also important to classify resources according to their function; e.g.,

- research and development costs
- investment costs
- operating costs

One reason for considering functions of resources is that they reveal the ways in which program costs change over time. For example, knowing that research and development costs are incurred typically at the outset of a program's life cycle will help the decision maker to project those costs into the future and make more informed decisions about the program's future.

Input structures are useful for cost-effectiveness analysis to help a decision maker to choose among program options. However, since ISSOE itself can be implemented in a variety of ways, this tool could just as well be used to help the decision maker in his or her choice of how to use ISSOE.

Relevant Costs

What type of costs should the decision maker consider to be costs? This is an important question since many items may be considered costs by some, and not by others. In general, the debate about what is a relevant cost can be somewhat reduced (but not completely eliminated) if the decision maker considers as relevant those costs that are directly affected by the decision being considered. Some illustrations of this general guide will be made in the next paragraph. However, it should be stressed that the relevance of a cost (or benefit) varies across persons and circumstances. If decision makers are trying to reach agreement on the results of a cost-effectiveness analysis, they must first come to agreement on what they will count as relevant.

The following are examples of costs that should probably be considered irrelevant because they are not affected by the decision being considered. Costs that resulted from previous decisions are quite often irrelevant. Costs that remain fixed or constant regardless of a program's implementation--e.g., salaries of teachers involved in ISSOE--are also irrelevant. Another irrelevant cost is one which is external to the decision maker's organization. For example, all of the costs of curriculum development, and teacher stipends for curriculum development, are irrelevant for a Director of occupational education. Since these costs are borne by the state, they are the state's costs, not those of the local occupational education agency. Local administrators need not consider them to be costs because there are no related forsaken opportunities affecting their decisions.

Relevant costs are not always obvious. One device for uncovering possibly relevant costs is to review how every individual directly involved in the program will be affected by the decision. Students, for example, may have to forgo earnings they would have had if they had not enrolled in a program. This hidden cost would be relevant if more student time were required by one program rather than another. Another non-obvious effect on students of a choice among alternative programs is the foregone learning that would have occurred in the program not selected. Although nothing compels a decision maker to consider a program participant's loss to be a relevant cost, we would assume most Directors would consider these effects to be relevant costs.

Measuring Costs

After preparing an input structure and determining the relevant costs, the next step is to measure the costs of the necessary resources and project them into the future.

Costs that can be measured in dollars include such things as salaries (foregone earnings), equipment purchases, depreciation and property tax exemptions. If the costs are considered relevant, the dollar amounts

should be entered into the input structure in the appropriate place. In projecting costs into the future, salaries and wages (if relevant) should be estimated as accurately as possible since small mistakes in these estimates can make a big difference in the final result.

Costs that are not measurable in dollars include quantifiable items such as time and space. These will almost always be counted as relevant since time and space resources used for a program cannot be used for another purpose. Student time is an especially relevant variable that can be measured conveniently in "student instructional hours." This is simply the product of the number of students times the number of hours each one will spend in the program. Space costs can often be made by some conventional measure such as square feet, or can be estimated in dollar costs (Thomas, 1971). The important thing is that the measure should be comparable for alternative programs, and that the costs should reflect the proportion of time the space will be used.

The last type of cost is that which cannot be easily measured in a quantifiable way. If these costs are relevant, they should be considered. They include such items as staff morale, public reaction, and foregone learning. Even though not quantifiable, these costs should be entered into the input structure in the appropriate place as a guide to decision making.

Comparing the Cost of Alternatives

Sound costing procedures often require expanding the perspectives of local administrators. Many will focus on the cost per graduate from a program. Since the number of graduates is a publicly visible and easily documented quantity, the administrator is tempted to concentrate on keeping costs low relative to this number. However, this approach is shortsighted. By gearing costs to the short-run objective of graduating students, the long-range consequences of poor quality graduates is ignored. If a vocational training program does not present evidence of preparing students for entry into work, more political ferment might eventually result causing the withdrawal of public support.

Instead, administrators might focus on the cost per enrollee. If the cost is not too great, an educational program that regards every enrollee as a client, whose requests for a service should be met whether they plan to graduate or not, the program will enjoy more public support in the long run. The administrator, therefore, might find it useful to compare the costs per enrollee of alternative programs.

The comparison of alternatives depends on whether the decision involves adopting a totally new program, or is merely an alternative procedure for reaching the same objectives. In the first case, the decision maker will look at the total cost of the program projected into the future. In the second case, the average program cost (e.g., per enrollee or per student instructional hour) gives the best basis for comparison.

In the case of a new program such as ISSOE, the total cost is pertinent as the long range objectives of occupational programs are kept plainly in view. Preparation of students for entry into work is the goal of both traditional and alternative programs. Thus, even if the total cost of the alternative is greater than the cost of the traditional approach, if the latter fails to meet valued goals as well as the alternative, then the alternative approach could be the most cost-effective option.

With ISSOE, the administrator can also look at average costs since ISSOE does not necessarily imply sweeping changes in what is already being done. The question then is, "Can what is being done already be done more cost-effectively with ISSOE?" But the point raised above applies here too: even if the average costs are higher for ISSOE, the long range benefits of ISSOE in terms of meeting the average enrollee's occupational needs while he/she is enrolled, can be an overriding consideration.

Different methods are used depending on whether the focus is on total or average costs. If it is on total costs, the question is how much an alternative program will cost, projected out to its horizon, in comparison with a so-called "base case." The base case is simply the cost of the present program, assuming that no new decisions are made, projected to

the same point in the future. The total cost of the alternative is then the difference between the alternative and the base case. Resources that remain constant are, of course, irrelevant; only the difference is relevant to the decision.

The logic of comparing average costs is similar. Whenever the two alternatives will achieve substantially the same ends, the administrator can examine the input structures for the two alternatives. When the inputs are overlapping, they can be eliminated from the input structures, since the decision either way will not be affected by them. Unit costs for the two alternatives should be as comparable as possible; e.g., costs per student instructional hour.

The above procedures for comparing the cost of alternative programs should make it clear whether a particular required resource should count as part of a program's cost. If the same resource is a constant in two programs, it need not be considered a part of the cost of either one. For example, different types of staff development might be required for either of two alternatives. In that case, the inputs for staff development (if any) would not be relevant unless one type were much more costly than the other.

APPLICATION TO ISSOE

It is now appropriate to apply the preceding methods and considerations in a preliminary way to ISSOE. As stated earlier, it must be left to the individual administrator to make a detailed application to his or her own site. From the general information on ISSOE presented earlier, some of these applications will become apparent when viewed from the standpoint of sound costing principles.

Potentially Relevant Costs of ISSOE

Costs associated with ISSOE are those benefits that must be forsaken to participate in ISSOE. Many apparent "costs" are not relevant. For example, teacher training is paid for by the state. Even if it were not paid for, teacher training is not relevant since teachers must be trained to do their jobs regardless of the program. Teacher stipends for curriculum development are also paid for by the state. Teacher and administrator salaries are not relevant since they remain constant regardless of the program. Materials are also paid for by the state (although delays might cause a need to Xerox materials).

Other costs of ISSOE are student time and teacher time.

The case for student time as a relevant cost of ISSOE could be made for special students who, in a thoroughly individualized format, may take longer to achieve competence. This is a "cost" only in the sense that there may be a net savings of time in a traditional program. But time does not necessarily index learning. Obviously, students who require longer than average to attain competency will not learn unless they have time to do so. "Savings" of time may result in a net loss in learning. Students themselves will not choose to save this time if it means failure to achieve the goals they had at the outset.

Related to the concern with student time are two principal reasons why student time represents a cost: forgone earnings and forgone learning.

To the extent that students in the individualized format of ISSOE might take longer to finish a program, they will give up earnings they might have gained had they completed the program on a traditional schedule. This "cost" may not be obvious but it is nonetheless real. Students who are not as fully prepared as they might have been under an alternative program risk giving up even earning power in the long run. There is also the cost to society of individuals who are unprepared to engage in productive work. Those individuals with special learning needs may take longer than the model student in completing their occupational training. The effect of this extra time will be better occupational preparation.

The above argument is actually reversed for gifted students. Theoretically, gifted students should be able to move through competency-based programs such as ISSOE faster. By the logic used earlier, this savings of time translates into fewer lost earning and less forgone learning.

Forgone learning is always a possible consideration in educational costing since a student spending time in one program is foreclosed from learning options that another program affords. However, this is not necessarily a strong concern if the new program replaces the old in the specific sense that it facilitates the same type of skill and concept learning as the old program. Of course, the decision maker must be satisfied that this is so. There is also some evidence that learning in a competency-based format is qualitatively different in the sense that the affective and motivational correlates of this learning are more positive. ISSOE clearly takes advantage of this where traditional programs fail.

Teacher time is frequently mentioned by critics of individualized, competency-based education. Educators have voiced concerns about the extra work that individualizing instruction and education involves. Two responses can be made immediately. One is that any extra work typically occurs in the developmental stages of a new competency-based program. This curriculum development phase is provided by ISSOE with no "new" work being required of the instructor. Secondly, a student-centered, individualized program has the advantage of freeing the teacher from delivering routine presentations repeatedly. More time is available for developing instructional techniques aimed at higher-level competencies. In the long run, a program based on the nonexistent "average" student may fail to turn out the most employable students.

Summary of Phase II Activities

The preceding section was a complete report of Phase II activities. These activities were designed and carried out in order to fulfill the four major objectives of the report which were (in brief):

1. identify the major role players and describe their roles
2. identify the major problems and concerns of each major role player
3. externally validate the preliminary results for the first two objectives
4. provide methods of cost-estimation for decision makers.

The major role players identified were, in order of their appearance in the report: Area Facilitators, Regional Coordinators, Directors of Occupational Education, Teachers, Team Leaders, SED/RCU, students, parents, Local Advisory Committees, and Central New York Regional Computer Services Center.

The principal methods used were interviews, questionnaires and examination of relevant documents. The roles of the major participants were described, including their activities, contributions, formal and informal linkages, and problems and concerns. Whenever feasible, the findings were validated on a representative sample of role incumbents.

Finally, methods of cost estimation, relevant to implementation of ISSOE programs, were explained. Dr. David Monk, Visiting Professor of Education at Cornell University, provided valuable insights and critiqued the draft of this section. However, project staff assume responsibility for the final product.

ARTICULATION AND DISSEMINATION

Articulation

A programmatic approach to ISSOE research and development activities at CIOE is strongly in evidence. Articulation among these projects is thus facilitated by overlapping project personnel, frequent meetings among project staff concerned with ISSOE, and overall coordination of all ISSOE activities by CIOE Director Dunn, with the assistance of Dr. Robert Frank, ISSOE Area Coordinator at CIOE. Thus, CIOE's organization and general modus operandi encourages many forms of articulation.

One example of articulation that has occurred is establishment of contacts with many individuals in ISSOE in the field. These contacts provide resources through identification of sites and individuals who are most compatible with research goals. These contacts are useful in planning workshops and other development activities for ISSOE Instructional Planning and for ISSOE Field Test, Phase I.

Beyond establishing contacts, Phase II provides useful background information for other ISSOE projects. Documentation of players, roles, linkages, and of user concerns, makes possible a better understanding of what is going on in the field, an understanding that relates directly to implementation activities incorporated into ISSOE projects, particularly the ISSOE Field Test, Phase I.

A number of user's concerns, particularly those expressed by Regional Coordinators and Area Facilitators, are immediately useful in product development. Many of their concerns have already affected development of forms and options for the ISSOE Field Test. Other concerns have been passed on for consideration in later development work.

Another outcome useful for articulation with other ISSOE projects is that participants in ISSOE have found the research and development effort to address their concerns. Finding sponsors and research and development staff to be responsive to their needs, they in turn are more likely to respond positively to implementation efforts.

Phase III will foster further articulation among ISSOE projects. The focus on student concerns are particularly important in this regard. To date, students have had only indirect input through teachers into development activities. Monitoring of student satisfaction will provide direct input for product design, especially for products designed to be used by students, such as employability profiles and individual program plans.

In summary, ISSOE Dissemination, Phases I and II now make it possible to incorporate user concerns, and interrelationships among users, as supported and recommended by Phase I. These developments provide not only the continuity necessary in programmatic research and development; they also provide needed input for, and articulation with, other phases of the total ISSOE effort.

Dissemination

Dissemination of project results has occurred informally through the numerous contacts with individuals who participated in the pre-validation phase of the research. In addition, a great amount of interest has been generated through project activities, resulting in a number of requests for further information on the results of the project. Since validation was completed only recently, formal presentations of results have not been made. The preliminary report of findings, completed in late January, 1980, was circulated to a number of key participants, and their critiques and reactions were incorporated in the final revision. One of these occasions was a meeting with Area Facilitators, SED personnel, and others at Cornell on January 29, 1980.

Further dissemination activities will include articles and/or presentations, when appropriate, in the Career Commentary and other professional journals and meetings. Other reports will be made, as appropriate and as requested, in meetings with Area Facilitators, Regional Coordinators, and other individuals.

Finally, dissemination of project activities and results will be facilitated through the production and distribution of this final report. Through the delivery of this report to appropriate persons at SED, and persons involved in ISSOE in New York State, and the inclusion of this report in ERIC, information regarding the ISSOE project will be disseminated to those who need or would desire the information the most.

RECOMMENDATIONS

The findings of ISSOE Dissemination, Phase II reveal consistent patterns in the descriptions of roles, linkages, and concerns of the role occupants. This section of the report focuses on the uses to which this information can be put for the ultimate end of the wider dissemination of ISSOE in New York State.

Recommendation Number One

A systematic study of the factors associated with successful teachers' classroom implementation of ISSOE needs to be conducted.

Previous ISSOE - Dissemination projects suggest that it is essential to identify teacher characteristics, and to study these characteristics within the local context, in order to best understand the dynamics of local classroom implementation of ISSOE. However, the specific factors associated with successful classroom implementation have not, as yet, been identified and documented.

This recommendation is supported by several broad findings of the study such as the following:

- ISSOE Dissemination, Phase II identified a broad concern that appeared to cross both regions and roles, that is, the need for a specific theory, or model, of ISSOE implementation. Teachers expressed the concern in terms of the practical constraints of classroom teaching in their particular program area. Recognizing that there is no one correct "model" of successful classroom implementation, but rather a host of conceivable successful configurations, it was, nevertheless, evident that teachers in general need to have more information on the various possible successful patterns.

- A systematic study of the factors associated with ISSOE teaching that is recognized as superior should afford other teachers an invaluable aid in their own teaching. This information would also have important implications for the whole range of individuals who are responsible for monitoring ISSOE implementation. These individuals need to be aware of the variety of factors that either facilitate or hinder successful classroom implementation.

- A related broad concern observed in ISSOE Dissemination, Phase II was with what appeared to be a delay in moving ISSOE out of the curriculum development phase into actual classroom implementation. Documentation of instances where implementation exists, and is successful, can help immeasurably to motivate individual teachers, and others responsible for implementation, to take similar steps.

Recommendation Number Two

A systematic study of the factors associated with student satisfaction with ISSOE programs also needs to be undertaken.

Ultimately, the individual student is the one for whose benefit competency-based occupational education is being implemented. For this reason, student satisfaction with ISSOE programs is crucial to successful implementation. However, scant information is available on the degree of satisfaction of students with their ISSOE programs.

This issue concerns non-technical outcomes of occupational education as well as traditional progress toward fulfillment of traditional curricular objectives. Student satisfaction is, of course, the "proof of the pudding" in vocational education that purports to meet students' individual needs. A pilot-testing of student satisfaction associated with successful teaching, and related factors, can accomplish several useful things: first, document the degree of satisfaction that exists; second, demonstrate the utility of affective data as another indicator that ISSOE is serving students' needs.

Recommendation Number Three

An investigation of management-related issues associated with the ISSOE roles previously identified needs to be carried out.

This project documented that analysis of user characteristics and needs is highly relevant to implementation efforts. Many of the specific concerns of participants in ISSOE were directly related to management issues. These findings should now be extended through an analysis of the special needs of those responsible for the administration and management of ISSOE at various levels.

ISSOE Dissemination, Phase II also documented consistent patterns among the variety of roles in ISSOE, as well as linkages between roles, and suggested ways in which understanding these patterns is relevant to implementation efforts. Further study of how management-related information flows between role-players, and of the degree of correspondence between management-related questions and the information actually available to administrators in ISSOE, would begin to provide a description of ISSOE that that would be useful in the overall management of the system. ISSOE Dissemination, Phase II suggested the usefulness of this type of information. However, the effort now needs to be enlarged to represent more categories of administrators in a systematic way. This would be a significant step toward developing a comprehensive management and evaluation plan for ISSOE.

Recommendation Number Four

A study of administrative characteristics and other factors associated with successful ISSOE implementation should be conducted.

ISSOE Dissemination, Phase II identified a broad concern in the field among a number of participants to have specific theory, or model, of ISSOE implementation to guide practice. Several administrators, for example, expressed the concern that there should be an explicit model to demonstrate

how to deal with management and cost issues. The detailed study of several distinct and apparently successful administrative patterns would directly address this need as well. This study should include a range of organizational and fiscal conditions, as well as levels of management, in order to obtain potentially useful information for the variety of circumstances found across the state.

Recommendation Number Five

Field-testing of ISSOE needs to be expanded and elaborated.

A broad concern was identified in ISSOE Dissemination, Phase II cutting across both regions and roles. This concern was over the need for a specific model of ISSOE implementation to guide practice. Recognizing that there is no one correct "model" of successful implementation of ISSOE but rather many conceivable configurations, there is, nevertheless, a need for documentation of these patterns for the benefit of local users. ISSOE Field Test-Phase I, now in progress, is testing the adaptability of ISSOE support material to local needs. Thus, the findings of the research being reported here provides a strong rationale for the current ISSOE Field Test and its proposed continuation.

Recommendation Number Six

An external advisory committee for ISSOE needs to be established.

This report identified a number of management-related problems and concerns of participants in ISSOE. However, to have impact, these concerns need to become input for the overall management of ISSOE.

As earlier ISSOE dissemination research revealed, for a project such as ISSOE to grow successfully and to be implemented across the State, it

is necessary that individuals who are most affected by that project be called upon to provide guidance and direction. These individuals should have no vested financial interests in ISSOE, and should be carefully selected to include a variety of perspectives from education, business, industry, government, etc.

The need for overall guidance that is responsive to local needs has been one of the guiding principles in the conception and development of ISSOE. The research reported here has revealed, however, a number of practical difficulties in transforming these principles into working realities. The proposal for a Statewide Advisory Committee for ISSOE addresses this need identified and supported by ISSOE Dissemination, Phase II research.

SUMMARY AND CONCLUSIONS

This report reviewed the major activities of the ISSOE Dissemination, Phase II project. The report placed the research in the context of previous research on the dissemination of ISSOE. Major participants in ISSOE were identified and their roles, contributions, areas of decision-making, and linkages with other players were documented. The major problems and concerns of these participants were also identified. These findings were validated by means of questionnaires, interviews and other methods, as appropriate. The findings indicated a wide variety of activities within designated ISSOE roles but substantial consistency among role occupants. There was also some consistency across roles in the problems and conerns most frequently expressed. The project also investigated a conceptual approach to estimating the costs of ISSOE programs. This phase of the research was focused on the cost-information needs of occupational education decision makers.

The findings of Phase II research provide a significant step toward planning dissemination activities which are targeted to the characteristics and concerns of potential users. A clarification of the formal and informal channels through which information flows is also useful for planning effective dissemination activities.

Six recommendations were made based on the findings of the report. They are:

1. investigation of the factors associated with successful implementation of the ISSOE curriculum in classroom teaching.
2. investigation of factors associated with student satisfaction with ISSOE programs.
3. investigation of management-related issues associated with the ISSOE roles previously identified.
4. investigation of administrative characteristics and other factors associated with successful ISSOE implementation.

5. expansion and elaboration of ISSOE field-testing.

6. establishment of an external advisory committee for ISSOE.

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APPENDICES

APPENDIX A

INTERVIEW GUIDE - REGIONAL COORDINATORS

REGIONAL COORDINATORS

1. How did you become a Regional Coordinator?
   - What's your background?
   - What kind of abilities do Regional Coordinators need to possess?

2. As a Regional Coordinator:
   - How do you get people interested in ISSOE?
   - What skills and backgrounds do these people typically have?
   - How does your system work? (problems, concerns)
   - Have you made any changes since you started with ISSOE? What?
   - What people in the LEA do you work with? How?
   - What are your most important activities?

3. Besides people in the LEA, who else do you work with concerning ISSOE?
   - In the community? How?
   - Other Regional Coordinators? Regional Planners? How?
   - Area Facilitators? How?
   - SED? How?
   - CIOE or CUNY? How?
   - Others?

4. What are the problems or concerns you have with ISSOE?
   - Personally?
   - LEA, Region, SED?
   - In terms of costs? (e.g., opportunity, economic?)
   - Distribution of materials?
   - Resource allocations?
   - Fiscal appropriations?

APPENDIX B

VALIDATION QUESTIONNAIRE
REGIONAL COORDINATORS

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Background information

Directions: Please respond to each item.

1. Name (optional):_____

2. Your position in addition to Coordinator:_____

3. Years and months as Coordinator:_____

4. Total years and months with ISSOE:_____

5. Percent of full-time spent as Coordinator:_____

6. Role of one who recruited you to be Coordinator:

   _____Dean; _____SED; _____Program Chair; _____Other (please specify)

   _____

7. Sex: _____Female; _____Male

Team Leader Information

Directions: Please respond to those items relevant to your region.

1. How many team leaders are operating in your region?

   _____(If none, write "0".)

2. Please list the activities for which your team leaders (if any) are responsible:

   1. _____
   2. _____
   3. _____
   4. _____
   5. _____
   6. _____
   7. _____
   8. _____

ISSOE ROLE: REGIONAL COORDINATOR

Activities

Directions:

First, what percentage of the time that you spend as Regional Coordinator do you spend on the following (or closely related) activities/

In the left-hand column under Time, indicate for each activity the approximate percent of time you spend on it by choosing the appropriate interval (for example, 1-5% = 5%, 6-10% - 10%, etc.). If you spend no time on an activity indicate this by "None."

Second, in the column under Rating, indicate how important you feel each activity is to your role as Regional Coordinator. Please use the following scale to rate importance: 1 = unimportant; 2 = slightly important; 3 = moderately important; 4 = highly important; 5 = absolutely essential.

Time (%)	Rating (1 - 5)	Activities
____	_____	1. Recruitment and retention of teachers.
____	_____	2. Dissemination of ISSOE materials to present and potential participants in ISSOE.
____	_____	3. Make presentation on ISSOE within their own region.
____	_____	4. Design and organization of own local infrastructure.
____	_____	5. Respond to various SED requests concerned with ISSOE related activities.
____	_____	6. Prepare and administer annual budgets.
____	_____	7. Participate in ISSOE research activities sponsored by SED.
____	_____	8. Attend area and state meetings.
		Other activities: Please list any activities not covered above. Estimate time and rate importance.
____	_____	
____	_____	

ISSOE ROLE: REGIONAL COORDINATOR

Problems and Concerns

Directions:

Please react briefly to each of the following areas of problems or concerns voiced by Regional Coordinators.

A. Role definition (e.g., need for direction and guidelines, especially for new role occupatnts; job security; turnover):

B. Budgeting (e.g., remuneration for teachers; justification to administrators; equity of distribution to regions):

C. Involvement of teachers (e.g., answers to teachers' concerns; lack of a model; dealing with teachers' frustrations; recruitment; use of teacher input):

D. Logistics (e.g., paperwork; travel demands; meetings; delay in receipt of materials):

E. Staff training (e.g., curriculum writing; making CBVE meaningful; training team leaders):

F. Assignments (e.g., deadlines; instructions; terminology):

G. Please discuss any problems or concerns you have that are not listed.

APPENDIX C

INTERVIEW GUIDE

DIRECTOR OF OCCUPATIONAL EDUCATION

OCCUPATIONAL EDUCATION DIRECTORS

AND SUPERVISORS

1. What is your role as an occupational education director (or other title) in relation to ISSOE?

2. How did you become associated with ISSOE?

3. Who do you work (communicate) with?_____
(Name other role occupants)

4. What kind of information do you need in fulfilling your role in relation to ISSOE?

5. What kind of problems do you have in your role with ISSOE? Do you have any recommendations to solve these problems?

6. What are your most important activities in relation to ISSOE?

7. What is unique or unusual about your setting that must be considered in implementation of ISSOE?

APPENDIX D

VALIDATION QUESTIONNAIRE

DIRECTOR OF OCCUPATIONAL EDUCATION

ISSOE ROLE: DIRECTOR OF OCCUPATIONAL EDUCATION

ISSOE Information

Directions: Please put a check on the line to the left of the group which has been most helpful in keeping you informed of ISSOE development:

_____ SED

_____ Regional Coordinators

_____ Area Facilitators

_____ CIOE

_____ IRDOE

_____ Other (please specify):

_____

ISSOE Activities

Directions: Please rate the importance to your role of each ISSOE Activity listed below using the following scale: 1 = Unimportant; 2 = Slightly Important; 3 = Moderately Important; 4 = Highly Important; 5 = Absolutely Essential.

Circle the appropriate number after each activity to indicate your "importance rating."

Activity	Importance Rating (circle)				
1. Work with local ISSOE Advisory Councils	1	2	3	4	5
2. Organize staff ISSOE development activities	1	2	3	4	5
3. Provide ISSOE-related curricular support and guidance	1	2	3	4	5
4. Review ISSOE and VTECS materials with teachers	1	2	3	4	5
5. Prepare ISSOE budget with SED	1	2	3	4	5
6. Work with ISSOE Regional Coordinators	1	2	3	4	5
7. Other (please specify): _____ _____	1	2	3	4	5

ISSOE Problems and Concerns

Directions: Please comment on each of the following areas of problems or concerns voiced by Directors regarding ISSOE:

A. ISSOE implementation (e.g., flexibility, adaptability to certain areas; support materials; need for money):

B. Concern for teachers (e.g., ongoing training; resistance to change; teacher use of curriculum materials):

C. ISSOE materials (e.g., targeted job-level, local validation):

D. Relation with other roles (e.g., SED; Regional Coordinators):

E. Other: Please list and comment on other problems or concerns that you perceive.

Thank you!

APPENDIX E

INTERVIEW GUIDE - ISSOE TEACHERS

ISSOE TEACHERS

1. What kind of training did you have to become an ISSOE teacher?

   1-a. Was that training adequate? What further information do you desire?

2. Have you received the content outline or begun to validate the ISSOE materials?

   2-a. If so, how, and with whom?

3. With whom do you have most contact concerning ISSOE?

4. Have you worked with or used the student reporting system or employ-ability profile?

5. Have you participated in any research and development activities concerning ISSOE? Explain.

6. Have you made any recommendations concerning ISSOE? To whom?

APPENDIX F

VALIDATION QUESTIONNAIRE

TEACHERS

Background Information

1. NAME (optional)_____

2. Your position title in addition to teacher:_____

3. Years and months as teacher:_____

4. Total years and months with ISSOE:_____

5. Percent of full-time spent as teacher:_____

6. Role of person who recruited into ISSOE:_____

   _____Reg. Coord. _____Occ. Educ. Dir. _____ Other (please specify)

   _____

7. _____Female _____Male

PLEASE COMPLETE THE FOLLOWING TWO PAGES

ISSOE ROLE: TEACHER

Directions:

In the left hand column under Time, indicate for each activity either "none" or the appropriate percent of time you spend on it by choosing the appropriate interval (for example, 1-5%=5%, 6-10%=10%, etc.).

Second, in the column under Rating, indicate how important you feel each activity is to your role as Teacher. Please use the following scale to rate importance: 1=unimportant, 2=slightly important, 3=moderately important, 4=highly important, 5=absolutely essential.

Time (%)	Rating (1-5)		Activities
____	_____	1.	Attendance at required orientation and training sessions.
____	_____	2.	Introduction of ISSOE modules into instruction.
____	_____	3.	Assist in the development of curriculum materials.
____	_____	4.	Participate in additional SED assignments.
____	_____	5.	Assist in the validation of ISSOE materials.
____	_____	6.	Work with Regional Coordinators to communicate any special needs and receive information and instruction.
____	_____	7.	Deal directly with students to assess their instructional needs and program objectives.
____	_____	8.	Additional activities (specify): _____
____	_____		_____
____	_____		_____
____	_____		_____

Problems and Concerns

Directions: Please react briefly to each of the following areas of problems or concerns voiced by teachers.

A. Applying ISSOE concepts (e.g., individualizing; class size; applying to particular fields; organizational constraints):_____

_____

_____

_____

B. Terminology (e.g., understanding; inappropriate to field; trivial concerns):_____

_____

_____

_____

C. SED feedback (e.g., slow in responding; negative feedback; lack of inclusion of teacher-developed materials):_____

_____

_____

_____

D. Teacher involvement (e.g., incentives; hesitance of teachers; need to see model working; logistics of organizing teachers; teacher competence):

_____

_____

_____

_____

Comments:_____

_____

_____

_____

APPENDIX G

Suggested Roles and Responsibilities
Division of Occupational Education Instruction
Staff Meeting - November 19, 1979

ISSOE

Suggested Roles and Responsibilities

Division of Occupational Education Instruction

Staff Meeting - November 19, 1979

Development

- Assist in the process of development and generation of tasks.
- Assure local advisory committees/employers' input in tasks generation.
- Participate in planning strategies for future development.
- Assist in determining what subject area will be developed next.
- Identify basic skills which are transferable within and across occupational areas.
- Prepare a list of action verbs for task development.
- Assist in development of CRM.
- Reflect and interpret legal aspects of occupations in regard to licensure.
- Respond to requests of Regional Coordinators.
- Initiate dialogue with Regional Coordinators.
- Provide guidance to Regional Coordinators on the structure of curriculum programs, units and modules.
- Respond to questions pertaining to quality of ISSOE materials.
- Work in direct contact with team leaders.
- Participate in regional meetings and inservice workshops.
- Help resolve major inconsistencies in materials during review process.
- Provide ongoing guidance and clarification to field regarding formats, terminology and structure.
- Take a leadership role in introducing innovations and changes.

Student Reporting

- Review student profile sheet to assure currency of tasks.
- Provide suggested content of student profile.
- Direct people toward information on careers.
- Contact guidance personnel at BOCES and LEA's to assure articulation and continuity.
- Identify specific evaluation techniques to use with tasks and validate the criteria used to evaluate students.
- Assist LEA in converting CRM results to numerical or letter grade for school use.
- Assist school personnel in techniques of preparing IPP/IEP.
- Develop and provide institutes with models of programs which cross subject area student scheduling.
- Suggest scheduling patterns and methods of operating open entry open exit programs.

Validation

- Prepare and supply business and industry with comprehensive information package on ISSOE and its process.
- Interpret and share results of validation for curriculum development, placement and bureau planning.
- Identify employers who could assist in validation process.
- Identify job titles and tasks appropriate to the job title.

Implementation

- Identify equipment and materials which should be used with task.
- Review materials for transferability of instructional strategies in various locations.
- Identify various instructional strategies used by teachers to implement the ISSOE process.
- Conduct inservice seminars on a regional basis to disseminate information on ISSOE and other relevant topics.
- Help teachers use ISSOE materials.
- Identify and promote visits to model programs.